

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS AND MINING							FORM 3 AMENDED REPORT						
<b>APPLICATION FOR PERMIT TO DRILL</b>							1. WELL NAME and NUMBER LC Fee 5-35D-47						
2. TYPE OF WORK DRILL NEW WELL <input checked="" type="checkbox"/> REENTER P&A WELL <input type="checkbox"/> DEEPEN WELL <input type="checkbox"/>							3. FIELD OR WILDCAT WILDCAT						
4. TYPE OF WELL Oil Well Coalbed Methane Well: NO							5. UNIT or COMMUNITIZATION AGREEMENT NAME						
6. NAME OF OPERATOR BILL BARRETT CORP							7. OPERATOR PHONE 303 312-8164						
8. ADDRESS OF OPERATOR 1099 18th Street Ste 2300, Denver, CO, 80202							9. OPERATOR E-MAIL BHilgers@billbarrettcorp.com						
10. MINERAL LEASE NUMBER (FEDERAL, INDIAN, OR STATE) Fee			11. MINERAL OWNERSHIP FEDERAL <input type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input type="checkbox"/> FEE <input checked="" type="checkbox"/>				12. SURFACE OWNERSHIP FEDERAL <input type="checkbox"/> INDIAN <input checked="" type="checkbox"/> STATE <input type="checkbox"/> FEE <input type="checkbox"/>						
13. NAME OF SURFACE OWNER (if box 12 = 'fee')							14. SURFACE OWNER PHONE (if box 12 = 'fee')						
15. ADDRESS OF SURFACE OWNER (if box 12 = 'fee')							16. SURFACE OWNER E-MAIL (if box 12 = 'fee')						
17. INDIAN ALLOTTEE OR TRIBE NAME (if box 12 = 'INDIAN') Uintah and Ouray			18. INTEND TO COMMINGLE PRODUCTION FROM MULTIPLE FORMATIONS YES <input type="checkbox"/> (Submit Commingling Application) NO <input checked="" type="checkbox"/>				19. SLANT VERTICAL <input type="checkbox"/> DIRECTIONAL <input checked="" type="checkbox"/> HORIZONTAL <input type="checkbox"/>						
20. LOCATION OF WELL		FOOTAGES		QTR-QTR		SECTION		TOWNSHIP		RANGE		MERIDIAN	
LOCATION AT SURFACE		1691 FNL 457 FWL		SWNW		35		4.0 S		7.0 W		U	
Top of Uppermost Producing Zone		1981 FNL 809 FWL		SWNW		35		4.0 S		7.0 W		U	
At Total Depth		1980 FNL 810 FWL		SWNW		35		4.0 S		7.0 W		U	
21. COUNTY DUCHESNE			22. DISTANCE TO NEAREST LEASE LINE (Feet) 810			23. NUMBER OF ACRES IN DRILLING UNIT 640							
			25. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed) 9455			26. PROPOSED DEPTH MD: 7170 TVD: 7131							
27. ELEVATION - GROUND LEVEL 7674			28. BOND NUMBER LPM4138148			29. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF APPLICABLE 43-180							
<b>Hole, Casing, and Cement Information</b>													
String	Hole Size	Casing Size	Length	Weight	Grade & Thread	Max Mud Wt.	Cement		Sacks	Yield	Weight		
COND	26	16	0 - 80	65.0	Unknown	8.8	No Used		0	0.0	0.0		
SURF	12.25	9.625	0 - 1600	36.0	J-55 ST&C	8.8	Halliburton Light , Type Unknown		210	3.16	11.0		
							Halliburton Premium , Type Unknown		210	1.36	14.8		
PROD	8.75	9.625	0 - 7170	17.0	P-110 LT&C	9.6	Unknown		600	2.31	11.0		
							Unknown		660	1.42	13.5		
<b>ATTACHMENTS</b>													
<b>VERIFY THE FOLLOWING ARE ATTACHED IN ACCORDANCE WITH THE UTAH OIL AND GAS CONSERVATION GENERAL RULES</b>													
<input checked="" type="checkbox"/> WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER						<input checked="" type="checkbox"/> COMPLETE DRILLING PLAN							
<input type="checkbox"/> AFFIDAVIT OF STATUS OF SURFACE OWNER AGREEMENT (IF FEE SURFACE)						<input type="checkbox"/> FORM 5. IF OPERATOR IS OTHER THAN THE LEASE OWNER							
<input checked="" type="checkbox"/> DIRECTIONAL SURVEY PLAN (IF DIRECTIONALLY OR HORIZONTALLY DRILLED)						<input checked="" type="checkbox"/> TOPOGRAPHICAL MAP							
NAME Venessa Langmacher				TITLE Senior Permit Analyst				PHONE 303 312-8172					
SIGNATURE				DATE 03/07/2013				EMAIL vlangmacher@billbarrettcorp.com					
API NUMBER ASSIGNED 43013520810000				APPROVAL  Permit Manager									

## **BILL BARRETT CORPORATION**

### **DRILLING PLAN**

#### **LC Fee 5-35D-47**

SW NW, 1691' FNL and 457' FWL, Section 35, T4S-R7W, USB&M (surface hole)

SW NW, 1980' FNL and 810' FWL, Section 35, T4S-R7W, USB&M (bottom hole)

Duchesne County, Utah

#### **1 - 2. Estimated Tops of Geological Markers and Formations Expected to Contain Water, Oil and Gas and Other Minerals**

<b><u>Formation</u></b>	<b><u>Depth – MD</u></b>	<b><u>Depth - TVD</u></b>
Green River	1,801'	1,801'
Mahogany	2,466'	2,461'
Lower Green River*	3,673'	3,646'
Douglas Creek	4,454'	4,416'
Black Shale	5,250'	5,211'
Castle Peak	5,490'	5,451'
Uteland Butte	5,835'	5,796'
Wasatch*	6,020'	5,981'
TD	7,170'	7,131'

\*PROSPECTIVE PAY

The Wasatch and the Lower Green River are primary objectives for oil/gas.

#### **3. BOP and Pressure Containment Data**

<b><u>Depth Intervals</u></b>	<b><u>BOP Equipment</u></b>
0 – 1,600'	NU Diverter or Rotating Head
1,600' – TD	11" 5000# Ram Type BOP 11" 5000# Annular BOP
- Drilling spool to accommodate choke and kill lines;	
- Ancillary equipment and choke manifold rated at 5,000 psi. All BOP and BOPE tests will be in accordance with the requirements of onshore Order No. 2;	
- The BLM and the State of Utah Division of Oil, Gas and Mining will be notified 24 hours in advance of all BOP pressure tests.	
- BOP hand wheels may be underneath the sub-structure of the rig if the drilling rig used is set up To operate most efficiently in this manner.	

#### **4. Casing Program**

<b><u>Hole Size</u></b>	<b><u>SETTING DEPTH</u></b>		<b><u>Casing Size</u></b>	<b><u>Casing Weight</u></b>	<b><u>Casing Grade</u></b>	<b><u>Thread</u></b>	<b><u>Condition</u></b>
	<b><u>(FROM)</u></b>	<b><u>(TO)</u></b>					
26"	Surface	80'	16"	65#			
12 1/4"	Surface	1,600'	9 5/8"	36#	J or K 55	ST&C	New
8 3/4"	Surface	TD	5 1/2"	17#	P-110	LT&C	New

Bill Barrett Corporation  
 Drilling Program  
 LC Fee 5-35D-47  
 Duchesne County, Utah

## 5. Cementing Program

16" Conductor Casing	Grout
9 5/8" Surface Casing	Lead: 210 sx Halliburton Light Premium with additives mixed at 11.0 ppg (yield = 3.16 ft <sup>3</sup> /sx) circulated to surface with 75% excess. TOC @ Surface Tail: 210 sx Halliburton Premium Plus cement with additives mixed at 14.8 ppg (yield = 1.36 ft <sup>3</sup> /sx), calculated hole volume with 75% excess. TOC @ 1,100'
5 1/2" Production Casing	Lead: 600 sx Tuned Light cement with additives mixed at 11.0 ppg (yield = 2.31 ft <sup>3</sup> /sx). TOC @ 1,100' Tail: 660 sx Halliburton Econocem cement with additives mixed at 13.5 ppg (yield = 1.42 ft <sup>3</sup> /sx). Top of cement to be determined by log and sample evaluation; estimated TOC @ 4,750'

## 6. Mud Program

<u>Interval</u>	<u>Weight</u>	<u>Viscosity</u>	<u>Fluid Loss</u> <u>(API filtrate)</u>	<u>Remarks</u>
0' – 80'	8.3 – 8.8	26 – 36	NC	Freshwater Spud Mud Fluid System
80' – 1,600'	8.3 – 8.8	26 – 36	NC	Freshwater Spud Mud Fluid System
1,600' – TD	8.6 – 9.6	42-52	20 cc or less	DAP Polymer Fluid System
Note: Sufficient mud materials to maintain mud properties, control lost circulation and to contain "kicks" will be available at wellsite. BBC may require minor amounts of diesel to be added to its fluid system in order to reduce torque and drag.				

## 7. Testing, Logging and Core Programs

Cores	None anticipated;
Testing	None anticipated; drill stem tests may be run on shows of interest;
Sampling	30' to 50' samples; surface casing to TD. Preserve samples all show intervals;
Surveys	MWD as needed to land wellbore;
Logging	DIL-GR-SP, FDC-CNL-GR-CALIPER-Pe-Microlog, Sonic-GR (all TD to surface). FMI & Sonic Scanner to be run at geologist's discretion.

## 8. Anticipated Abnormal Pressures or Temperatures

No abnormal pressures or temperatures or other hazards are anticipated.

Maximum anticipated bottom hole pressure equals approximately 3559 psi\* and maximum anticipated surface pressure equals approximately 1990 psi\*\* (bottom hole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot).

\*Max Mud Wt x 0.052 x TD = A (bottom hole pressure)

\*\*Maximum surface pressure = A – (0.22 x TD)

Bill Barrett Corporation  
Drilling Program  
LC Fee 5-35D-47  
Duchesne County, Utah

**9. Auxiliary Equipment**

- a) Upper kelly cock; lower Kelly cock will be installed while drilling
  - b) Inside BOP or stab-in valve (available on rig floor)
  - c) Safety valve(s) and subs to fit all string connections in use
- Mud monitoring will be visually observed

**10. Location and Type of Water Supply**

Water for the drilling and completion will be trucked from the Duchesne City Culinary Water Dock located in Sec. 1, T4S, R5W water right number 43-180.

**11. Drilling Schedule**

Location Construction: November 2013  
Spud: November 2013  
Duration: 15 days drilling time  
45 days completion time



# Bill Barrett Corporation

## LAKE CANYON & BLACK TAIL RIDGE CEMENT VOLUMES

**Well Name:** LC Fee 5-35D-47

### Surface Hole Data:

Total Depth:	1,600'
Top of Cement:	0'
OD of Hole:	12.250"
OD of Casing:	9.625"

### Calculated Data:

Lead Volume:	602.9	ft <sup>3</sup>
Lead Fill:	1,100'	
Tail Volume:	274.0	ft <sup>3</sup>
Tail Fill:	500'	

### Cement Data:

Lead Yield:	3.16	ft <sup>3</sup> /sk
% Excess:	75%	
Top of Lead:	0'	

### Calculated # of Sacks:

# SK's Lead:	210
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Tail Yield:	1.36	ft <sup>3</sup> /sk
% Excess:	75%	
Top of Tail:	1,100'	

# SK's Tail:	210
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### Production Hole Data:

Total Depth:	7,170'
Top of Cement:	1,100'
Top of Tail:	4,750'
OD of Hole:	8.750"
OD of Casing:	5.500"

### Calculated Data:

Lead Volume:	1382.9	ft <sup>3</sup>
Lead Fill:	3,650'	
Tail Volume:	917.0	ft <sup>3</sup>
Tail Fill:	2,420'	

### Cement Data:

Lead Yield:	2.31	ft <sup>3</sup> /sk
Tail Yield:	1.42	ft <sup>3</sup> /sk
% Excess:	50%	

### Calculated # of Sacks:

# SK's Lead:	600
# SK's Tail:	660

<b>LC Fee 5-35D-47 Proposed Cementing Program</b>
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<u>Job Recommendation</u>	<u>Surface Casing</u>
<b>Lead Cement - (1100' - 0')</b>	
Halliburton Light Premium	Fluid Weight: 11.0 lbm/gal
5.0 lbm/sk Silicalite Compacted	Slurry Yield: 3.16 ft <sup>3</sup> /sk
0.25 lbm/sk Kwik Seal	Total Mixing Fluid: 19.48 Gal/sk
0.125 lbm/sk Poly-E-Flake	Top of Fluid: 0'
2.0% Bentonite	Calculated Fill: 1,100'
	Volume: 107.37 bbl
	<b>Proposed Sacks: 210 sks</b>
<b>Tail Cement - (TD - 1100')</b>	
Premium Cement	Fluid Weight: 14.8 lbm/gal
2.0% Calcium Chloride	Slurry Yield: 1.36 ft <sup>3</sup> /sk
	Total Mixing Fluid: 6.37 Gal/sk
	Top of Fluid: 1,100'
	Calculated Fill: 500'
	Volume: 48.80 bbl
	<b>Proposed Sacks: 210 sks</b>

<u>Job Recommendation</u>	<u>Production Casing</u>
<b>Lead Cement - (4750' - 1100')</b>	
Tuned Light <sup>TM</sup> System	Fluid Weight: 11.0 lbm/gal
	Slurry Yield: 2.31 ft <sup>3</sup> /sk
	Total Mixing Fluid: 10.65 Gal/sk
	Top of Fluid: 1,100'
	Calculated Fill: 3,650'
	Volume: 246.30 bbl
	<b>Proposed Sacks: 600 sks</b>
<b>Tail Cement - (7170' - 4750')</b>	
Econocem <sup>TM</sup> System	Fluid Weight: 13.5 lbm/gal
0.125 lbm/sk Poly-E-Flake	Slurry Yield: 1.42 ft <sup>3</sup> /sk
1.0 lbm/sk Granulite TR 1/4	Total Mixing Fluid: 6.61 Gal/sk
	Top of Fluid: 4,750'
	Calculated Fill: 2,420'
	Volume: 163.31 bbl
	<b>Proposed Sacks: 660 sks</b>

**T4S, R7W, U.S.B.&M.****BILL BARRETT CORPORATION**

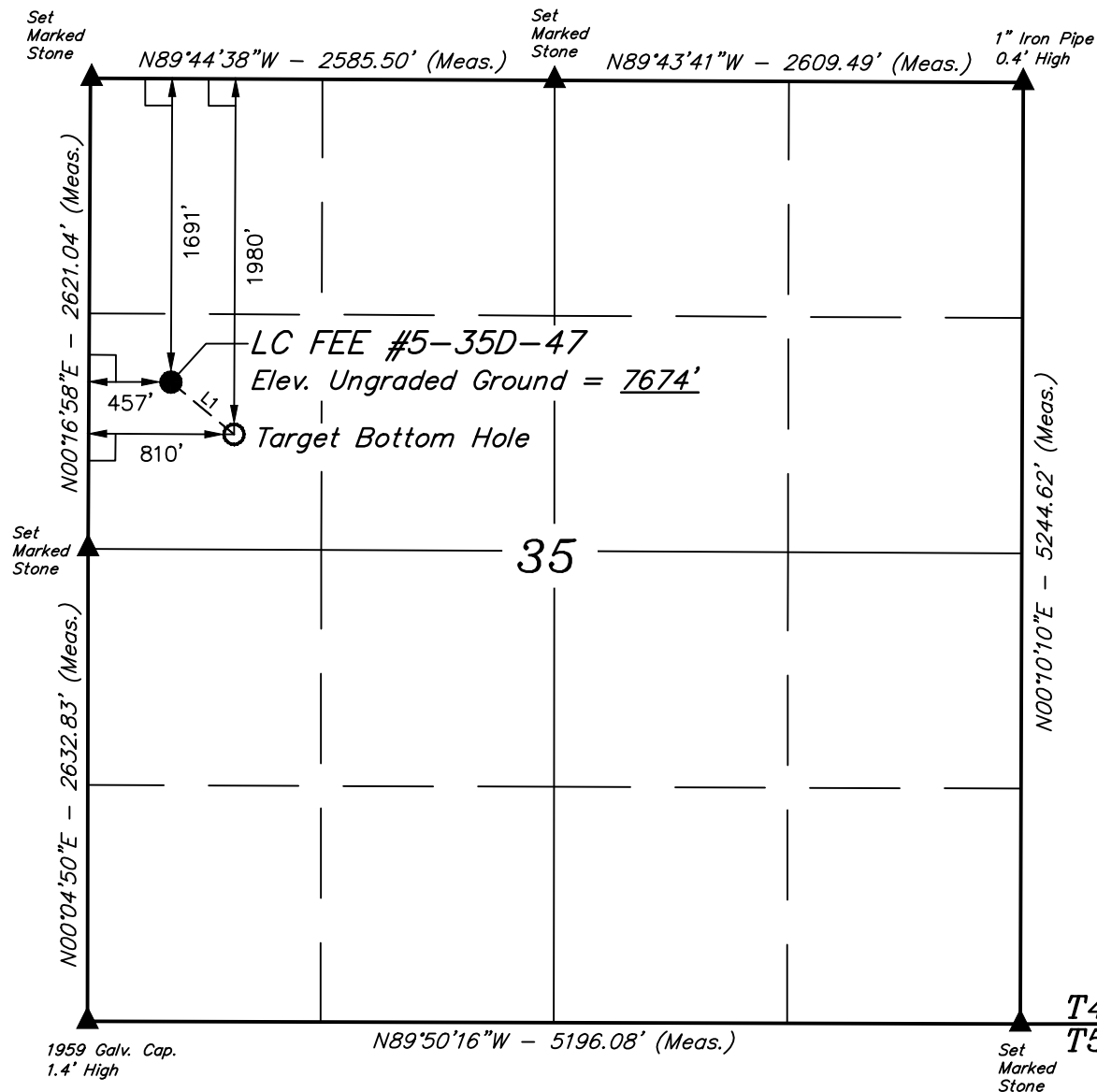
Well location, LC FEE #5-35D-47, located as shown in the SW 1/4 NW 1/4 of Section 35, T4S, R7W, U.S.B.&M, Duchesne County, Utah.

**BASIS OF ELEVATION**

BENCH MARK (M67) LOCATED IN THE SW 1/4 OF SECTION 9, T5S, R4W, U.S.B.&M., TAKEN FROM THE DUCHESNE SE QUADRANGLE, UTAH, DUCHESNE COUNTY, 7.5 MINUTE QUAD. (TOPOGRAPHIC MAP) PUBLISHED BY THE UNITED STATES DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY. SAID ELEVATION IS MARKED ON CAP AS BEING 6097 FEET.

**BASIS OF BEARINGS**

BASIS OF BEARINGS IS A G.P.S. OBSERVATION.

**LINE TABLE**

LINE	DIRECTION	LENGTH
L1	S50°22'43"E	456.20'



SCALE

**CERTIFICATE**

THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

REGISTERED LAND SURVEYOR  
REGISTRATION NO. 161319  
STATE OF UTAH

REV: 02-18-13 K.O.

REV: 09-18-12 K.O.

**UINTAH ENGINEERING & LAND SURVEYING**  
85 SOUTH 200 EAST - VERNAL, UTAH 84078  
(435) 789-1017

**LEGEND:**

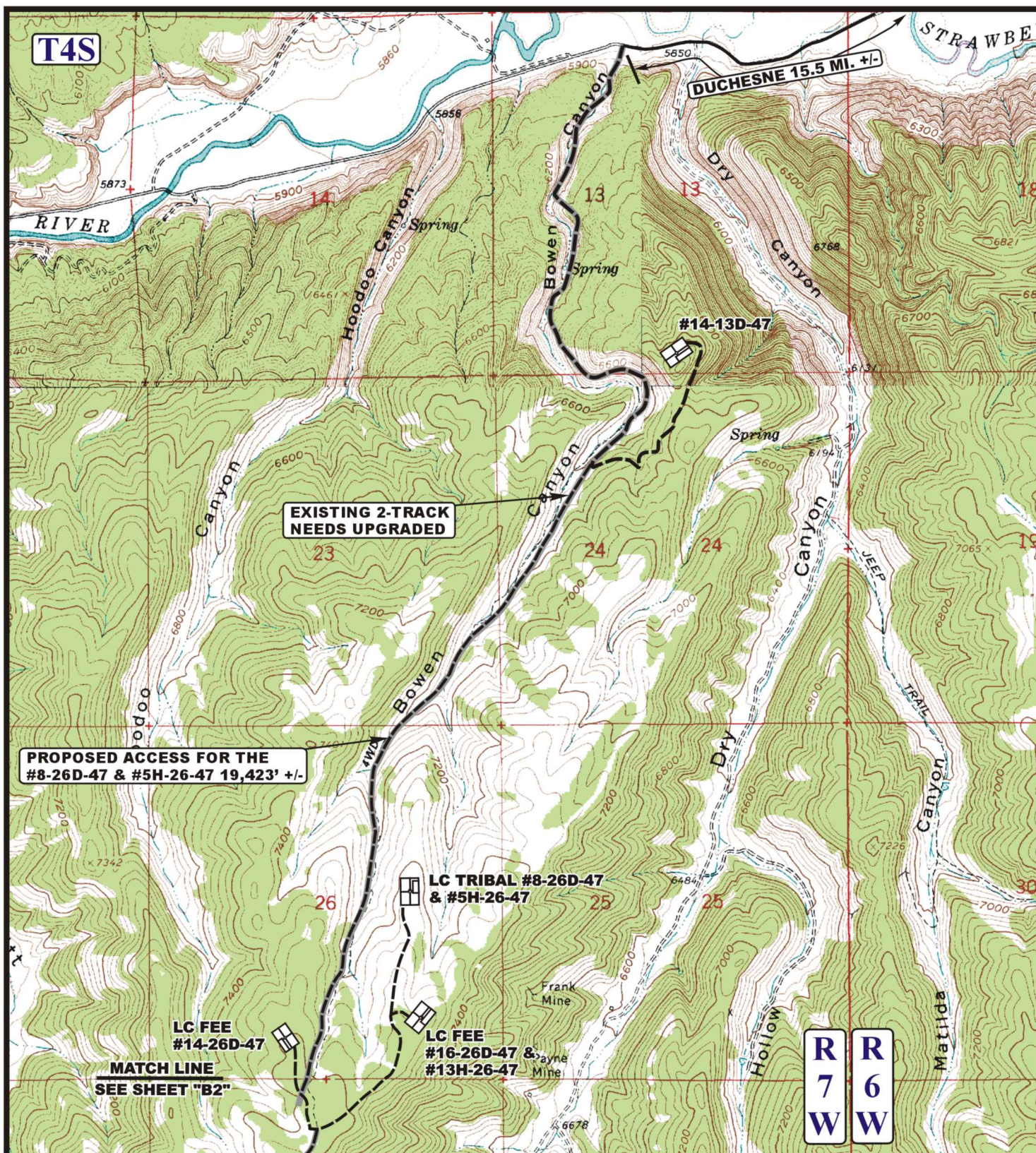
- └─┘ = 90° SYMBOL
- = PROPOSED WELL HEAD.
- ▲ = SECTION CORNERS LOCATED.

NAD 83 (TARGET BOTTOM HOLE)	NAD 83 (SURFACE LOCATION)
LATITUDE = 40°05'29.30" (40.091472)	LATITUDE = 40°05'32.17" (40.092269)
LONGITUDE = 110°38'57.00" (110.649167)	LONGITUDE = 110°39'01.53" (110.650425)
NAD 27 (TARGET BOTTOM HOLE)	NAD 27 (SURFACE LOCATION)
LATITUDE = 40°05'29.45" (40.091514)	LATITUDE = 40°05'32.32" (40.092311)
LONGITUDE = 110°38'54.44" (110.648456)	LONGITUDE = 110°38'58.97" (110.649714)

SCALE 1" = 1000'	DATE SURVEYED: 12-15-11	DATE DRAWN: 01-11-12
PARTY C.A. T.A. V.H.	REFERENCES G.L.O. PLAT	
WEATHER COLD	FILE BILL BARRETT CORPORATION	

RECEIVED: March 07, 2013

**A**  
**TOPO**

**LEGEND:**

	EXISTING ROAD
	PROPOSED ACCESS ROAD
	EXISTING 2-TRACK NEEDS UPGRADED

**BILL BARRETT CORPORATION**

LC FEE #5-35D-47  
SECTION 35, T4S, R7W, U.S.B.&M.  
1691' FNL 457' FWL



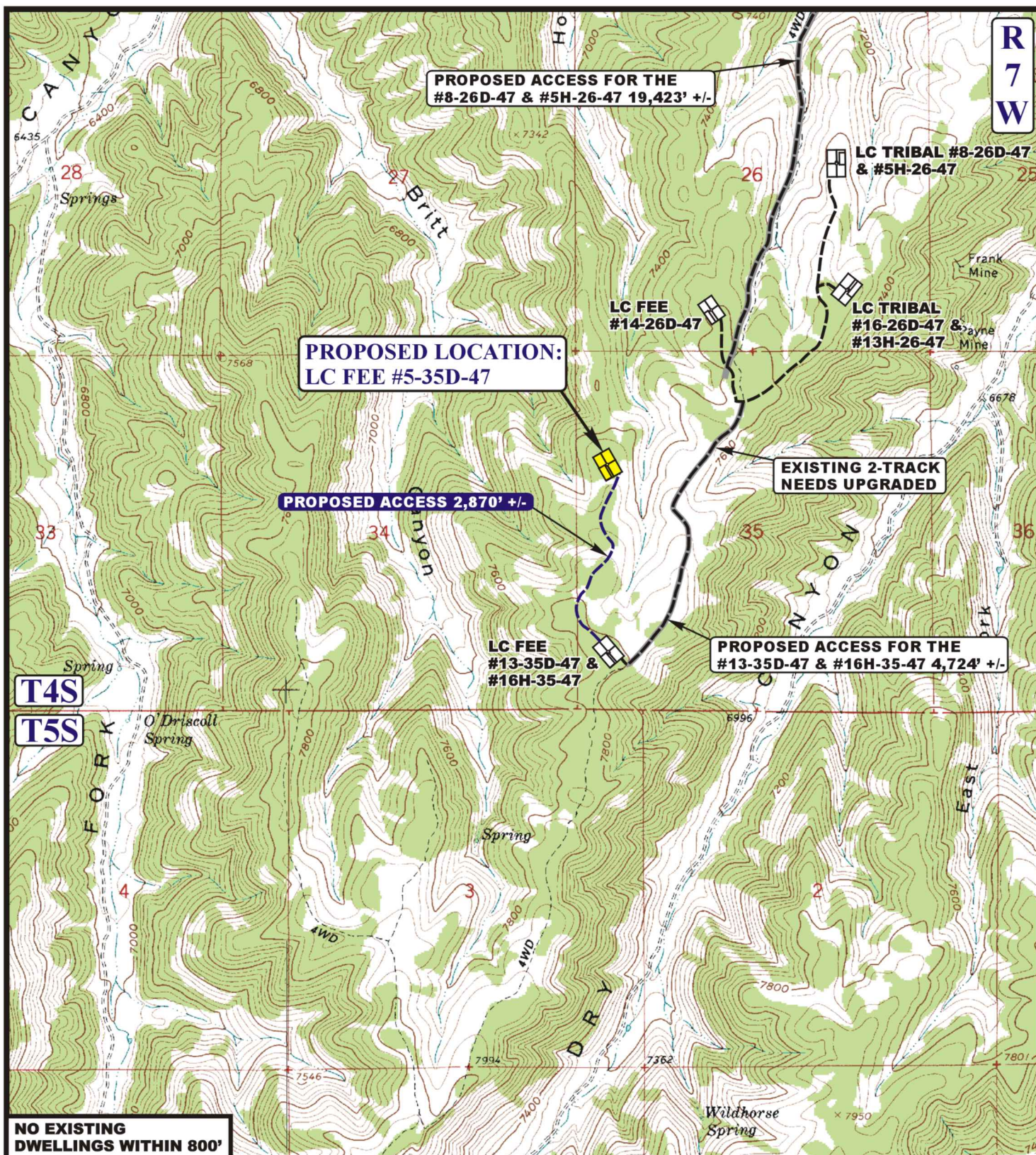
Uintah Engineering & Land Surveying  
85 South 200 East Vernal, Utah 84078  
(435) 789-1017 \* FAX (435) 789-1813

**ACCESS ROAD  
MAP**

**12 20 11**  
MONTH DAY YEAR

**B1  
TOPO**

SCALE: 1" = 2000' DRAWN BY: C.L. REVISED: 02-19-13

**LEGEND:**

- EXISTING ROAD
- PROPOSED ACCESS ROAD
- EXISTING 2-TRACK NEEDS UPGRADED

**BILL BARRETT CORPORATION**

**LC FEE #5-35D-47**  
**SECTION 35, T4S, R7W, U.S.B.&M.**  
**1691' FNL 457' FWL**



**Uintah Engineering & Land Surveying**  
 85 South 200 East Vernal, Utah 84078  
 (435) 789-1017 \* FAX (435) 789-1813

**ACCESS ROAD**  
**MAP**

**12** **20** **11**  
 MONTH DAY YEAR

SCALE: 1" = 2000' DRAWN BY: C.L. REVISED: 02-19-13

**B2**  
**TOPO**

**C**  
**TOPO**



SITE DETAILS: 5-35D-47 LC Fee  
Lake Canyon

Site Latitude: 40° 5' 32.320 N  
Site Longitude: 110° 38' 58.970 W

**COMPANY DETAILS: BILL BARRETT CORP**

Calculation Method: Minimum Curvature  
Error System: ISCWSA  
Scan Method: Closest Approach 3D  
Error Surface: Elliptical Conic  
Warning Method: Error Ratio

Positional Uncertainty: 0.0  
Convergence: 0.54  
Local North: True

**WELL DETAILS:** 5-35D-47 LC Fee

Ground Level: 7672.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	641800.06	2237878.60	40° 5' 32.320 N	110° 38' 58.970 W	

### WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
5-35D-47 LC Fee 3PT MKR	4791.0	-290.3	352.0	40° 5' 29.450 N	110° 38' 54.442 W	Rectangle (Sides: L200.0 W200.0)
5-35D-47 LC Fee PBHL	7131.0	-290.3	352.0	40° 5' 29.450 N	110° 38' 54.442 W	Rectangle (Sides: L200.0 W200.0)

## SECTION DETAILS

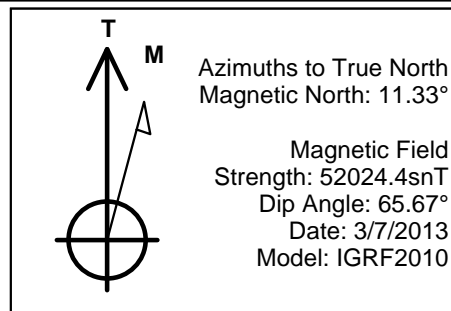
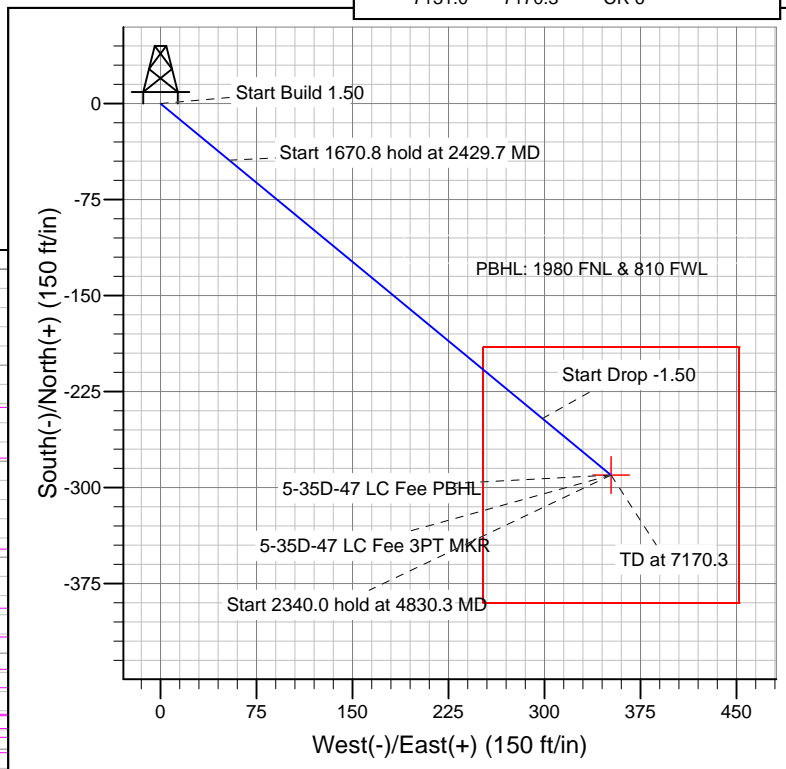
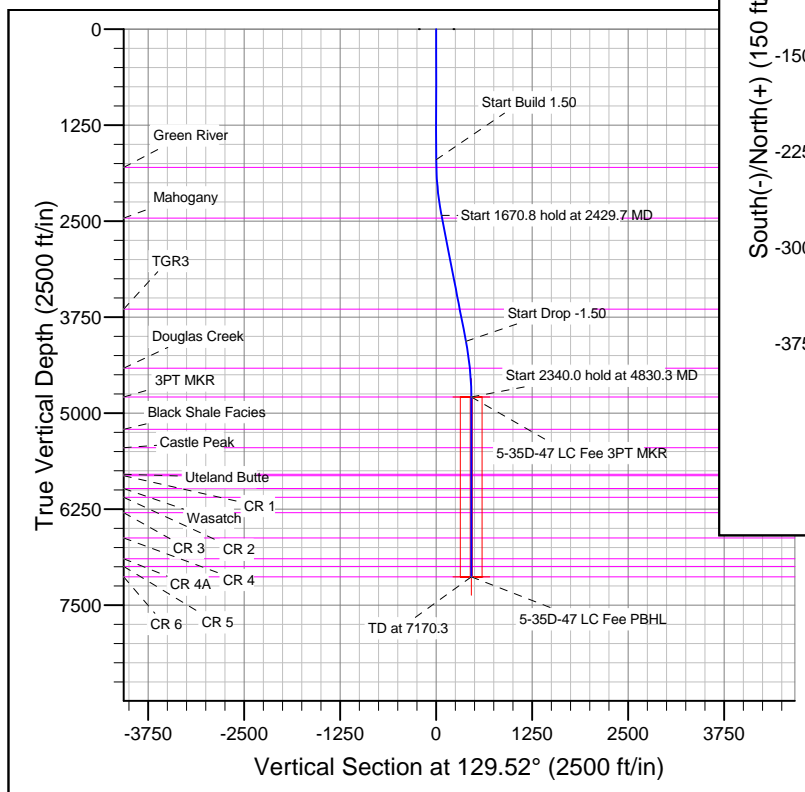
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	1700.0	0.00	0.00	1700.0	0.0	0.0	0.00	0.00	0.0	
3	2429.7	10.95	129.52	2425.3	-44.2	53.6	1.50	129.52	69.5	
4	4100.6	10.95	129.52	4065.7	-246.1	298.3	0.00	0.00	386.7	
5	4830.3	0.00	0.00	4791.0	-290.3	352.0	1.50	180.00	456.2	5-35D-47 LC Fee 3PT MKR
6	7170.3	0.00	0.00	7131.0	-290.3	352.0	0.00	0.00	456.2	5-35D-47 LC Fee PBHL

### FORMATION TOP DETAILS

TVDPath	MDPPath	Formation
1801.0	1801.0	Green River
2461.0	2466.1	Mahogany
3646.0	3673.0	TGR3
4416.0	4454.7	Douglas Creek
4791.0	4830.3	3PT MKR
5211.0	5250.3	Black Shale Facies
5451.0	5490.3	Castle Peak
5796.0	5835.3	Uteland Butte
5816.0	5855.3	CR 1
5981.0	6020.3	Wasatch
6096.0	6135.3	CR 2
6296.0	6335.3	CR 3
6626.0	6665.3	CR 4
6896.0	6935.3	CR 4A
6996.0	7035.3	CR 5
7131.0	7170.3	CR 6

## CASING DETAILS

No casing data is available



## Bill Barrett Corp

## Planning Report

<b>Database:</b>	Compass	<b>Local Co-ordinate Reference:</b>	Well 5-35D-47 LC Fee
<b>Company:</b>	BILL BARRETT CORP	<b>TVD Reference:</b>	KB @ 7687.0ft (Original Well Elev)
<b>Project:</b>	DUCHESNE COUNTY, UT (NAD 27)	<b>MD Reference:</b>	KB @ 7687.0ft (Original Well Elev)
<b>Site:</b>	5-35D-47 LC Fee	<b>North Reference:</b>	True
<b>Well:</b>	5-35D-47 LC Fee	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1		

<b>Project</b>	DUCHESNE COUNTY, UT (NAD 27)		
<b>Map System:</b>	US State Plane 1927 (Exact solution)	<b>System Datum:</b>	Ground Level
<b>Geo Datum:</b>	NAD 1927 (NADCON CONUS)		
<b>Map Zone:</b>	Utah Central 4302		

Site	5-35D-47 LC Fee				
Site Position:		Northing:	641,800.07 ft	Latitude:	40° 5' 32.320 N
From:	Lat/Long	Easting:	2,237,878.60 ft	Longitude:	110° 38' 58.970 W
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.54 °

Well	5-35D-47 LC Fee					
Well Position	+N/-S	0.0 ft	Northing:	641,800.06 ft	Latitude:	40° 5' 32.320 N
	+E/-W	0.0 ft	Easting:	2,237,878.60 ft	Longitude:	110° 38' 58.970 W
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	7,672.0 ft

<b>Wellbore</b>	Wellbore #1				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	3/7/2013	11.33	65.67	52,024

<b>Design</b>	Design #1			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>
	0.0	0.0	0.0	129.52

<b>Plan Sections</b>										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,429.7	10.95	129.52	2,425.3	-44.2	53.6	1.50	1.50	0.00	129.52	
4,100.6	10.95	129.52	4,065.7	-246.1	298.3	0.00	0.00	0.00	0.00	
4,830.3	0.00	0.00	4,791.0	-290.3	352.0	1.50	-1.50	0.00	180.00	5-35D-47 LC Fee 3PT
7,170.3	0.00	0.00	7,131.0	-290.3	352.0	0.00	0.00	0.00	0.00	5-35D-47 LC Fee PBI

## Bill Barrett Corp

## Planning Report

<b>Database:</b>	Compass	<b>Local Co-ordinate Reference:</b>	Well 5-35D-47 LC Fee
<b>Company:</b>	BILL BARRETT CORP	<b>TVD Reference:</b>	KB @ 7687.0ft (Original Well Elev)
<b>Project:</b>	DUCHESNE COUNTY, UT (NAD 27)	<b>MD Reference:</b>	KB @ 7687.0ft (Original Well Elev)
<b>Site:</b>	5-35D-47 LC Fee	<b>North Reference:</b>	True
<b>Well:</b>	5-35D-47 LC Fee	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1		

## Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
<b>Start Build 1.50</b>									
1,800.0	1.50	129.52	1,800.0	-0.8	1.0	1.3	1.50	1.50	0.00
1,801.0	1.52	129.52	1,801.0	-0.8	1.0	1.3	1.50	1.50	0.00
<b>Green River</b>									
1,900.0	3.00	129.52	1,899.9	-3.3	4.0	5.2	1.50	1.50	0.00
2,000.0	4.50	129.52	1,999.7	-7.5	9.1	11.8	1.50	1.50	0.00
2,100.0	6.00	129.52	2,099.3	-13.3	16.1	20.9	1.50	1.50	0.00
2,200.0	7.50	129.52	2,198.6	-20.8	25.2	32.7	1.50	1.50	0.00
2,300.0	9.00	129.52	2,297.5	-29.9	36.3	47.0	1.50	1.50	0.00
2,400.0	10.50	129.52	2,396.1	-40.7	49.3	64.0	1.50	1.50	0.00
2,429.7	10.95	129.52	2,425.3	-44.2	53.6	69.5	1.50	1.50	0.00
<b>Start 1670.8 hold at 2429.7 MD</b>									
2,466.1	10.95	129.52	2,461.0	-48.6	58.9	76.4	0.00	0.00	0.00
<b>Mahogany</b>									
2,500.0	10.95	129.52	2,494.3	-52.7	63.9	82.8	0.00	0.00	0.00
2,600.0	10.95	129.52	2,592.5	-64.8	78.5	101.8	0.00	0.00	0.00
2,700.0	10.95	129.52	2,690.7	-76.9	93.2	120.8	0.00	0.00	0.00
2,800.0	10.95	129.52	2,788.8	-89.0	107.8	139.8	0.00	0.00	0.00
2,900.0	10.95	129.52	2,887.0	-101.0	122.5	158.8	0.00	0.00	0.00
3,000.0	10.95	129.52	2,985.2	-113.1	137.1	177.8	0.00	0.00	0.00
3,100.0	10.95	129.52	3,083.4	-125.2	151.8	196.8	0.00	0.00	0.00
3,200.0	10.95	129.52	3,181.6	-137.3	166.4	215.7	0.00	0.00	0.00
3,300.0	10.95	129.52	3,279.7	-149.4	181.1	234.7	0.00	0.00	0.00
3,400.0	10.95	129.52	3,377.9	-161.4	195.7	253.7	0.00	0.00	0.00
3,500.0	10.95	129.52	3,476.1	-173.5	210.4	272.7	0.00	0.00	0.00
3,600.0	10.95	129.52	3,574.3	-185.6	225.0	291.7	0.00	0.00	0.00
3,673.0	10.95	129.52	3,646.0	-194.4	235.7	305.6	0.00	0.00	0.00
<b>TGR3</b>									
3,700.0	10.95	129.52	3,672.5	-197.7	239.7	310.7	0.00	0.00	0.00
3,800.0	10.95	129.52	3,770.6	-209.8	254.3	329.7	0.00	0.00	0.00
3,900.0	10.95	129.52	3,868.8	-221.9	269.0	348.7	0.00	0.00	0.00
4,000.0	10.95	129.52	3,967.0	-233.9	283.6	367.6	0.00	0.00	0.00
4,100.0	10.95	129.52	4,065.2	-246.0	298.3	386.6	0.00	0.00	0.00
4,100.6	10.95	129.52	4,065.7	-246.1	298.3	386.7	0.00	0.00	0.00
<b>Start Drop -1.50</b>									

## Bill Barrett Corp

## Planning Report

<b>Database:</b>	Compass	<b>Local Co-ordinate Reference:</b>	Well 5-35D-47 LC Fee
<b>Company:</b>	BILL BARRETT CORP	<b>TVD Reference:</b>	KB @ 7687.0ft (Original Well Elev)
<b>Project:</b>	DUCHESNE COUNTY, UT (NAD 27)	<b>MD Reference:</b>	KB @ 7687.0ft (Original Well Elev)
<b>Site:</b>	5-35D-47 LC Fee	<b>North Reference:</b>	True
<b>Well:</b>	5-35D-47 LC Fee	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1		

## Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,200.0	9.45	129.52	4,163.6	-257.3	311.9	404.4	1.50	-1.50	0.00
4,300.0	7.95	129.52	4,262.4	-266.9	323.6	419.5	1.50	-1.50	0.00
4,400.0	6.45	129.52	4,361.7	-274.9	333.3	432.0	1.50	-1.50	0.00
4,454.7	5.63	129.52	4,416.0	-278.6	337.7	437.8	1.50	-1.50	0.00
<b>Douglas Creek</b>									
4,500.0	4.95	129.52	4,461.2	-281.2	340.9	442.0	1.50	-1.50	0.00
4,600.0	3.45	129.52	4,560.9	-285.9	346.6	449.3	1.50	-1.50	0.00
4,700.0	1.95	129.52	4,660.8	-288.9	350.2	454.0	1.50	-1.50	0.00
4,800.0	0.45	129.52	4,760.7	-290.2	351.9	456.1	1.50	-1.50	0.00
4,830.3	0.00	0.00	4,791.0	-290.3	352.0	456.2	1.50	-1.50	-428.06
<b>Start 2340.0 hold at 4830.3 MD - 3PT MKR</b>									
4,900.0	0.00	0.00	4,860.7	-290.3	352.0	456.2	0.00	0.00	0.00
5,000.0	0.00	0.00	4,960.7	-290.3	352.0	456.2	0.00	0.00	0.00
5,100.0	0.00	0.00	5,060.7	-290.3	352.0	456.2	0.00	0.00	0.00
5,200.0	0.00	0.00	5,160.7	-290.3	352.0	456.2	0.00	0.00	0.00
5,250.3	0.00	0.00	5,211.0	-290.3	352.0	456.2	0.00	0.00	0.00
<b>Black Shale Facies</b>									
5,300.0	0.00	0.00	5,260.7	-290.3	352.0	456.2	0.00	0.00	0.00
5,400.0	0.00	0.00	5,360.7	-290.3	352.0	456.2	0.00	0.00	0.00
5,490.3	0.00	0.00	5,451.0	-290.3	352.0	456.2	0.00	0.00	0.00
<b>Castle Peak</b>									
5,500.0	0.00	0.00	5,460.7	-290.3	352.0	456.2	0.00	0.00	0.00
5,600.0	0.00	0.00	5,560.7	-290.3	352.0	456.2	0.00	0.00	0.00
5,700.0	0.00	0.00	5,660.7	-290.3	352.0	456.2	0.00	0.00	0.00
5,800.0	0.00	0.00	5,760.7	-290.3	352.0	456.2	0.00	0.00	0.00
5,835.3	0.00	0.00	5,796.0	-290.3	352.0	456.2	0.00	0.00	0.00
<b>Uteland Butte</b>									
5,855.3	0.00	0.00	5,816.0	-290.3	352.0	456.2	0.00	0.00	0.00
<b>CR 1</b>									
5,900.0	0.00	0.00	5,860.7	-290.3	352.0	456.2	0.00	0.00	0.00
6,000.0	0.00	0.00	5,960.7	-290.3	352.0	456.2	0.00	0.00	0.00
6,020.3	0.00	0.00	5,981.0	-290.3	352.0	456.2	0.00	0.00	0.00
<b>Wasatch</b>									
6,100.0	0.00	0.00	6,060.7	-290.3	352.0	456.2	0.00	0.00	0.00
6,135.3	0.00	0.00	6,096.0	-290.3	352.0	456.2	0.00	0.00	0.00
<b>CR 2</b>									
6,200.0	0.00	0.00	6,160.7	-290.3	352.0	456.2	0.00	0.00	0.00
6,300.0	0.00	0.00	6,260.7	-290.3	352.0	456.2	0.00	0.00	0.00
6,335.3	0.00	0.00	6,296.0	-290.3	352.0	456.2	0.00	0.00	0.00
<b>CR 3</b>									
6,400.0	0.00	0.00	6,360.7	-290.3	352.0	456.2	0.00	0.00	0.00
6,500.0	0.00	0.00	6,460.7	-290.3	352.0	456.2	0.00	0.00	0.00
6,600.0	0.00	0.00	6,560.7	-290.3	352.0	456.2	0.00	0.00	0.00
6,665.3	0.00	0.00	6,626.0	-290.3	352.0	456.2	0.00	0.00	0.00
<b>CR 4</b>									
6,700.0	0.00	0.00	6,660.7	-290.3	352.0	456.2	0.00	0.00	0.00
6,800.0	0.00	0.00	6,760.7	-290.3	352.0	456.2	0.00	0.00	0.00
6,900.0	0.00	0.00	6,860.7	-290.3	352.0	456.2	0.00	0.00	0.00
6,935.3	0.00	0.00	6,896.0	-290.3	352.0	456.2	0.00	0.00	0.00
<b>CR 4A</b>									
7,000.0	0.00	0.00	6,960.7	-290.3	352.0	456.2	0.00	0.00	0.00
7,035.3	0.00	0.00	6,996.0	-290.3	352.0	456.2	0.00	0.00	0.00
<b>CR 5</b>									

## Bill Barrett Corp

## Planning Report

<b>Database:</b>	Compass	<b>Local Co-ordinate Reference:</b>	Well 5-35D-47 LC Fee
<b>Company:</b>	BILL BARRETT CORP	<b>TVD Reference:</b>	KB @ 7687.0ft (Original Well Elev)
<b>Project:</b>	DUCHESNE COUNTY, UT (NAD 27)	<b>MD Reference:</b>	KB @ 7687.0ft (Original Well Elev)
<b>Site:</b>	5-35D-47 LC Fee	<b>North Reference:</b>	True
<b>Well:</b>	5-35D-47 LC Fee	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Design #1		

## Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
7,100.0	0.00	0.00	7,060.7	-290.3	352.0	456.2	0.00	0.00	0.00
7,170.3	0.00	0.00	7,131.0	-290.3	352.0	456.2	0.00	0.00	0.00
TD at 7170.3 - CR 6									

## Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
5-35D-47 LC Fee PBHL - plan hits target - Rectangle (sides W200.0 H200.0 D0.0)	0.00	0.00	7,131.0	-290.3	352.0	641,513.12	2,238,233.30	40° 5' 29.450 N	110° 38' 54.442 W
5-35D-47 LC Fee 3PT M - plan hits target - Rectangle (sides W200.0 H200.0 D2,340.0)	0.00	0.00	4,791.0	-290.3	352.0	641,513.12	2,238,233.30	40° 5' 29.450 N	110° 38' 54.442 W

## Formations

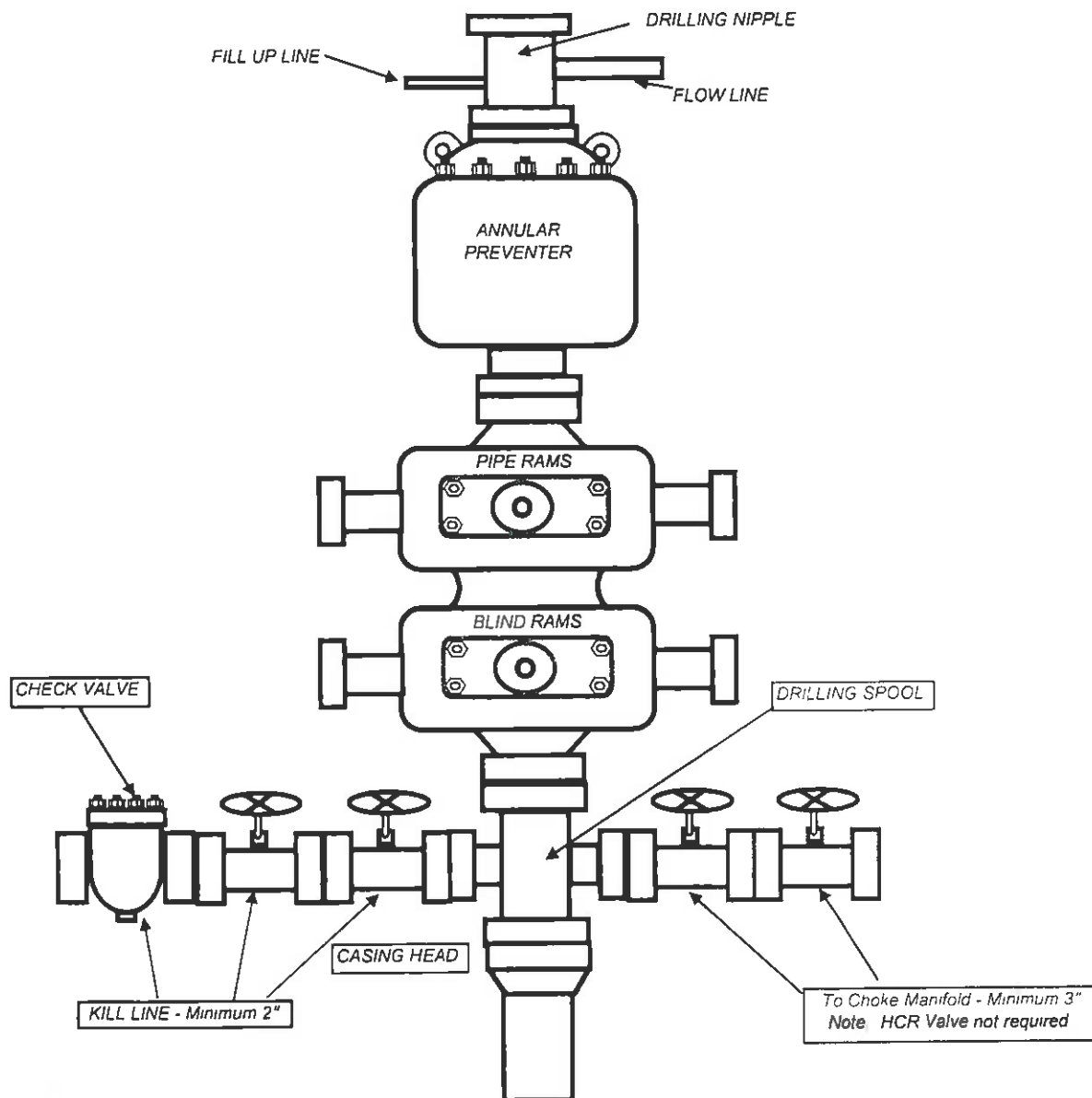
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,801.0	1,801.0	Green River		0.00	
2,466.1	2,461.0	Mahogany		0.00	
3,673.0	3,646.0	TGR3		0.00	
4,454.7	4,416.0	Douglas Creek		0.00	
4,830.3	4,791.0	3PT MKR		0.00	
5,250.3	5,211.0	Black Shale Facies		0.00	
5,490.3	5,451.0	Castle Peak		0.00	
5,835.3	5,796.0	Uteland Butte		0.00	
5,855.3	5,816.0	CR 1		0.00	
6,020.3	5,981.0	Wasatch		0.00	
6,135.3	6,096.0	CR 2		0.00	
6,335.3	6,296.0	CR 3		0.00	
6,665.3	6,626.0	CR 4		0.00	
6,935.3	6,896.0	CR 4A		0.00	
7,035.3	6,996.0	CR 5		0.00	
7,170.3	7,131.0	CR 6		0.00	

## Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
1,700.0	1,700.0	0.0	0.0	Start Build 1.50
2,429.7	2,425.3	-44.2	53.6	Start 1670.8 hold at 2429.7 MD
4,100.6	4,065.7	-246.1	298.3	Start Drop -1.50
4,830.3	4,791.0	-290.3	352.0	Start 2340.0 hold at 4830.3 MD
7,170.3	7,131.0	-290.3	352.0	TD at 7170.3

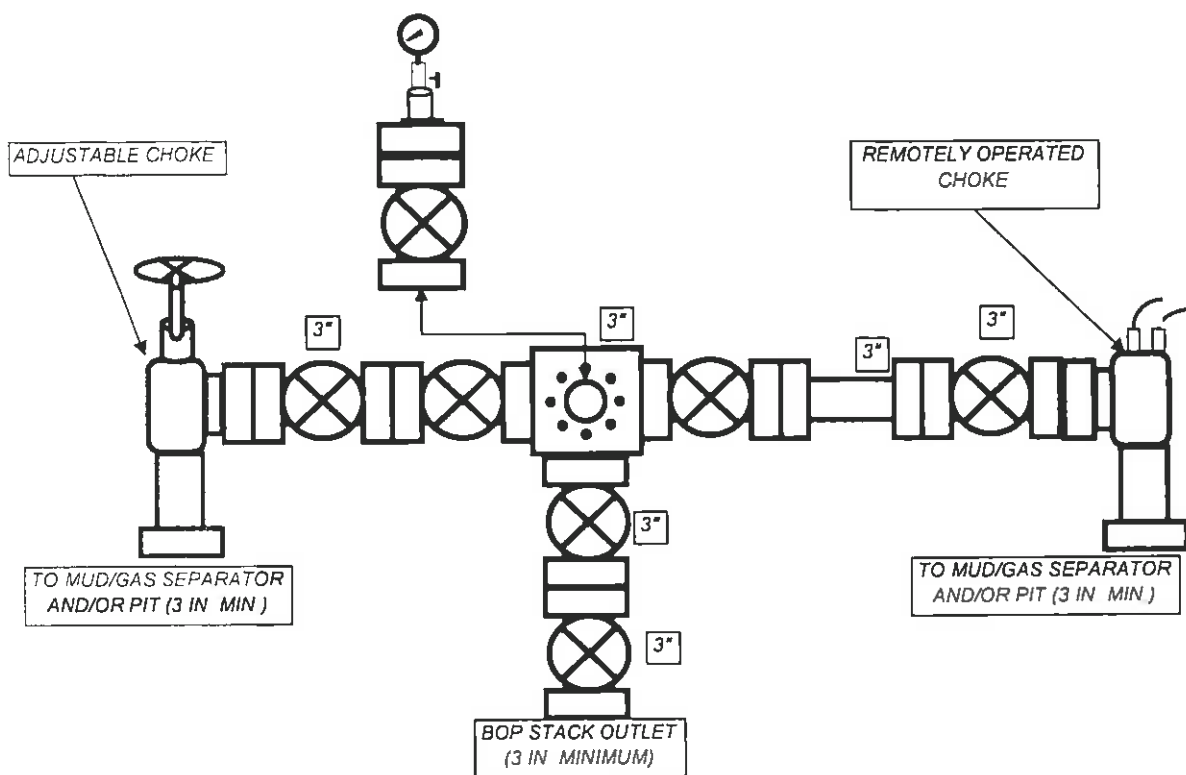
## BILL BARRETT CORPORATION

### TYPICAL 5,000 p.s.i. BLOWOUT PREVENTER



# BILL BARRETT CORPORATION

## TYPICAL 5,000 p.s.i. CHOKE MANIFOLD





March 7, 2013

Ms. Diana Mason – Petroleum Technician  
State of Utah Division of Oil, Gas and Mining  
1594 West North Temple, Suite 1210  
P. O. Box 145801  
Salt Lake City, Utah 84114-5801

Re: Directional Drilling R649-3-11  
**Lake Canyon Area #5-35D-47 LC Fee Well**  
Surface: 1691' FNL & 457' FWL, SWNW, 35-T4S-R7W, USM  
Bottom Hole: 1980' FNL & 810' FWL, SWNW, 35-T4S-R7W, USM  
Duchesne County, Utah

Dear Ms. Mason,

Pursuant to the filing of Bill Barrett Corporation's ("BBC") Application for Permit to Drill the above referenced well, we hereby submit this letter in accordance with Oil & Gas Conservation Rules R649-2, R649-3, R649-10 and R649-11, pertaining to the Location and Siting of Wells.

- The proposed location is within our Lake Canyon Area.
- BBC is permitting this well as a directional well in order to minimize surface disturbance. By locating the well at the surface location and directionally drilling from this location, BBC will be able to utilize the existing road and pipelines in the area.
- The well will be drilled under an Exploration and Development Agreement between the Ute Indian Tribe and Ute Distribution Corporation. Ute Energy, LLC owns a right to participate in this well.
- BBC certifies that it is the working interest owner of all lands within 460 feet of the proposed well location, and together with Ute Energy, LLC, we own 100% of the working interest in these lands.

Based on the information provided, BBC requests that the permit be granted pursuant to R649-3-11. Should you have any questions or need further information, please contact me at 303-312-8544.

Sincerely,



David Watts  
Landman

1099 18<sup>TH</sup> STREET  
SUITE 2300  
DENVER, CO 80202  
P 303.293.9100  
F 303.291.0420

**RECEIVED:** March 07, 2013

**BILL BARRETT CORPORATION**

## LOCATION LAYOUT FOR

LC FEE #5-35D-47  
SECTION 35, T4S, R7W, U.S.B.&M  
1691' FNL 457' FWL

**FIGURE #1**

SCALE: 1" = 60'

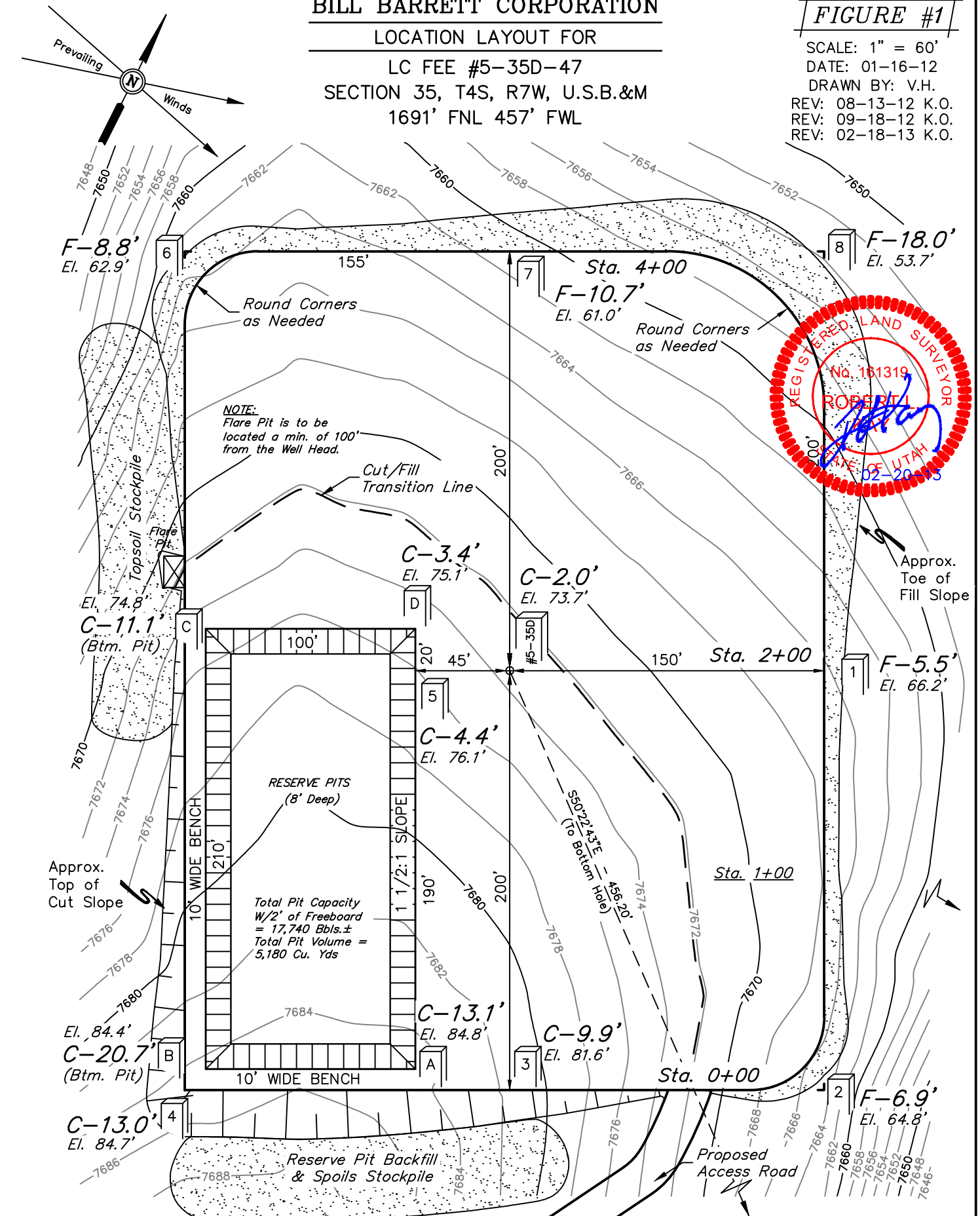
DATE: 01-16-12

DRAWN BY: V.H.

REV: 08-13-12 K.O.

REV: 09-18-12 K.O.

REV: 02-18-13 K.O.



Elev. Ungraded Ground At Loc. Stake = 7673.7'  
FINISHED GRADE ELEV. AT LOC. STAKE = 7671.7'

UINTAH ENGINEERING & LAND SURVEYING  
85 So. 200 East \* Vernal, Utah 84078 \* (435) 789-1017

RECEIVED: March 07, 2013

**BILL BARRETT CORPORATION****TYPICAL CROSS SECTIONS FOR**

LC FEE #5-35D-47

SECTION 35, T4S, R7W, U.S.B.&amp;M

1691' FNL 457' FWL

**FIGURE #2**

1" = 40'  
X-Section  
Scale  
1" = 100'

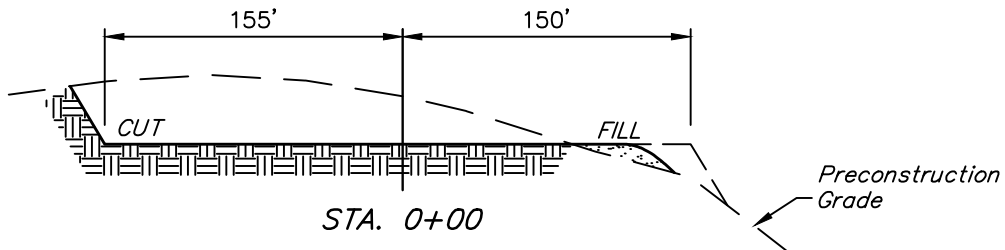
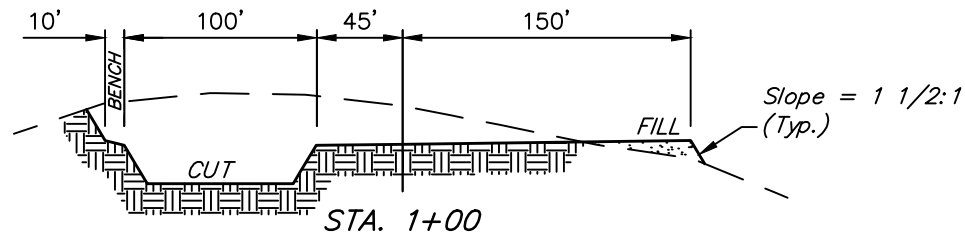
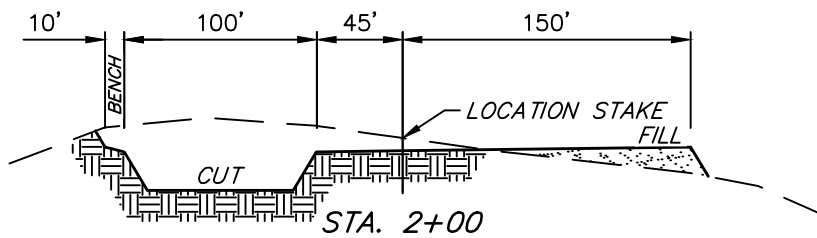
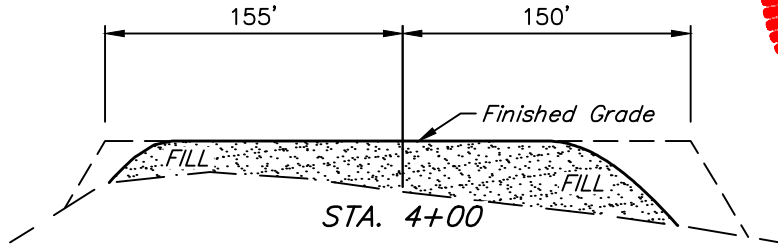
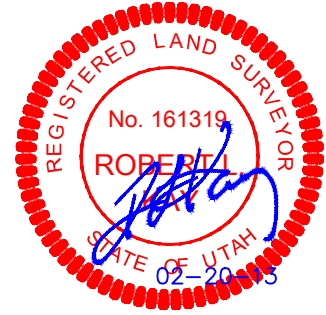
DATE: 01-16-12

DRAWN BY: V.H.

REV: 08-13-12 K.O.

REV: 09-18-12 K.O.

REV: 02-18-13 K.O.

**NOTE:**

Topsoil should not be  
Stripped Below Finished  
Grade on Substructure Area.

**APPROXIMATE ACREAGES**

WELL SITE DISTURBANCE = ± 4.755 ACRES  
ACCESS ROAD DISTURBANCE = ± 1.835 ACRES  
PIPELINE DISTURBANCE = ± 1.888 ACRES  
TOTAL = ± 8.478 ACRES

\* NOTE:  
FILL QUANTITY INCLUDES  
5% FOR COMPACTION

**APPROXIMATE YARDAGES**

(12") Topsoil Stripping = 5,170 Cu. Yds.  
Remaining Location = 19,120 Cu. Yds.  
TOTAL CUT = 24,290 CU. YDS.  
FILL = 16,530 CU. YDS.

EXCESS MATERIAL = 7,760 Cu. Yds.  
Topsoil & Pit Backfill = 7,760 Cu. Yds.  
(1/2 Pit Vol.)  
EXCESS UNBALANCE = 0 Cu. Yds.  
(After Interim Rehabilitation)

**UINTAH ENGINEERING & LAND SURVEYING**  
85 So. 200 East \* Vernal, Utah 84078 \* (435) 789-1017

RECEIVED: March 07, 2013

**BILL BARRETT CORPORATION****TYPICAL RIG LAYOUT FOR**

LC FEE #5-35D-47  
SECTION 35, T4S, R7W, U.S.B.&M  
1691' FNL 457' FWL

**FIGURE #3**

SCALE: 1" = 60'

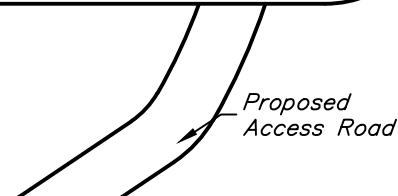
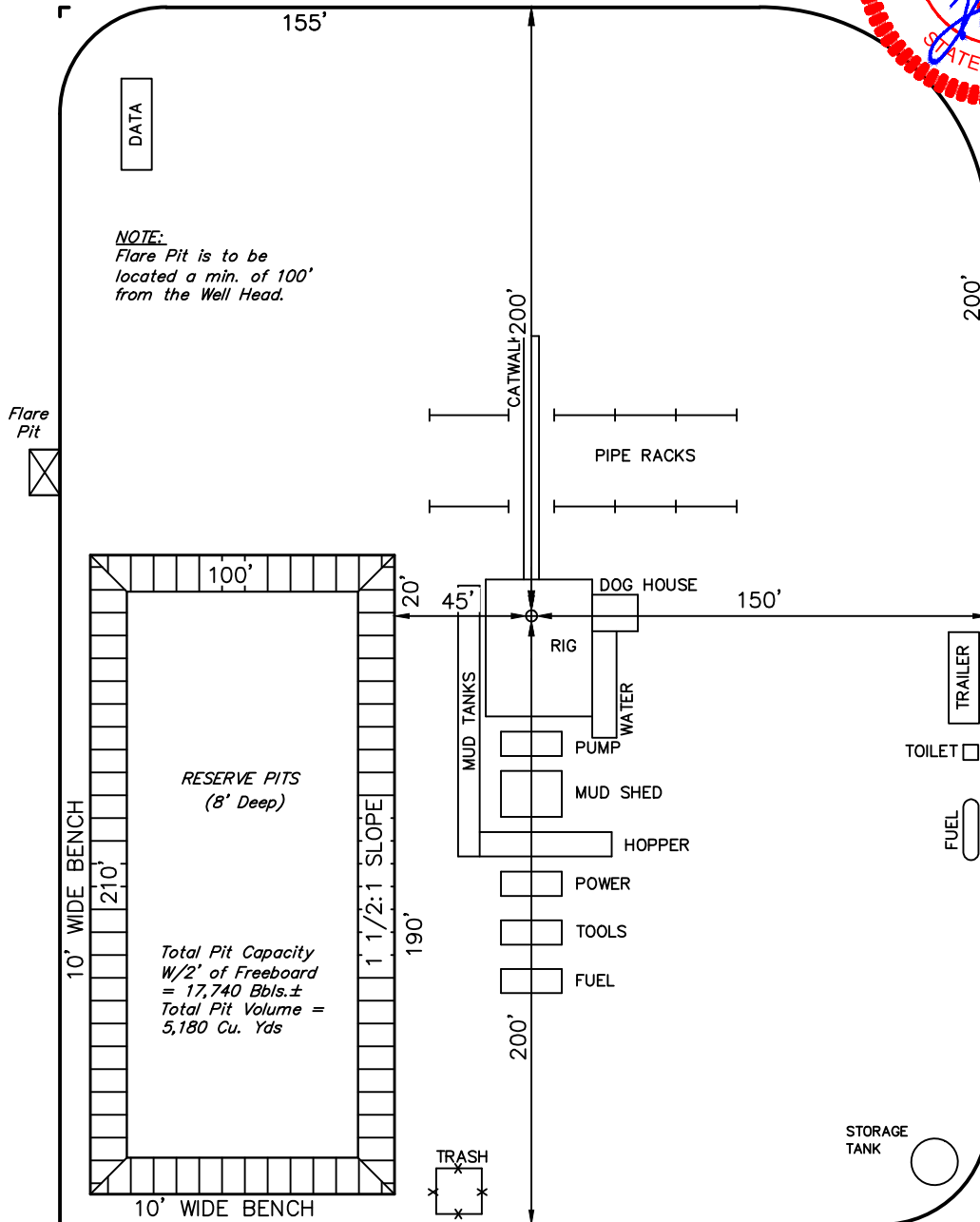
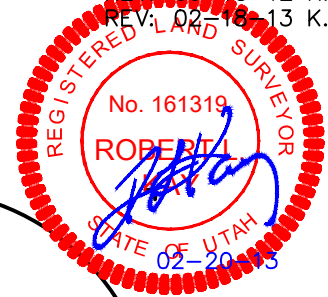
DATE: 01-16-12

DRAWN BY: V.H.

REV: 08-13-12 K.O.

REV: 09-18-12 K.O.

REV: 02-18-13 K.O.



**UINTAH ENGINEERING & LAND SURVEYING**  
85 So. 200 East \* Vernal, Utah 84078 \* (435) 789-1017

RECEIVED: March 07, 2013

**BILL BARRETT CORPORATION****INTERIM RECLAMATION PLAN FOR**

LC FEE #5-35D-47  
SECTION 35, T4S, R7W, U.S.B.&M  
1691' FNL 457' FWL

**FIGURE #4**

SCALE: 1" = 60'

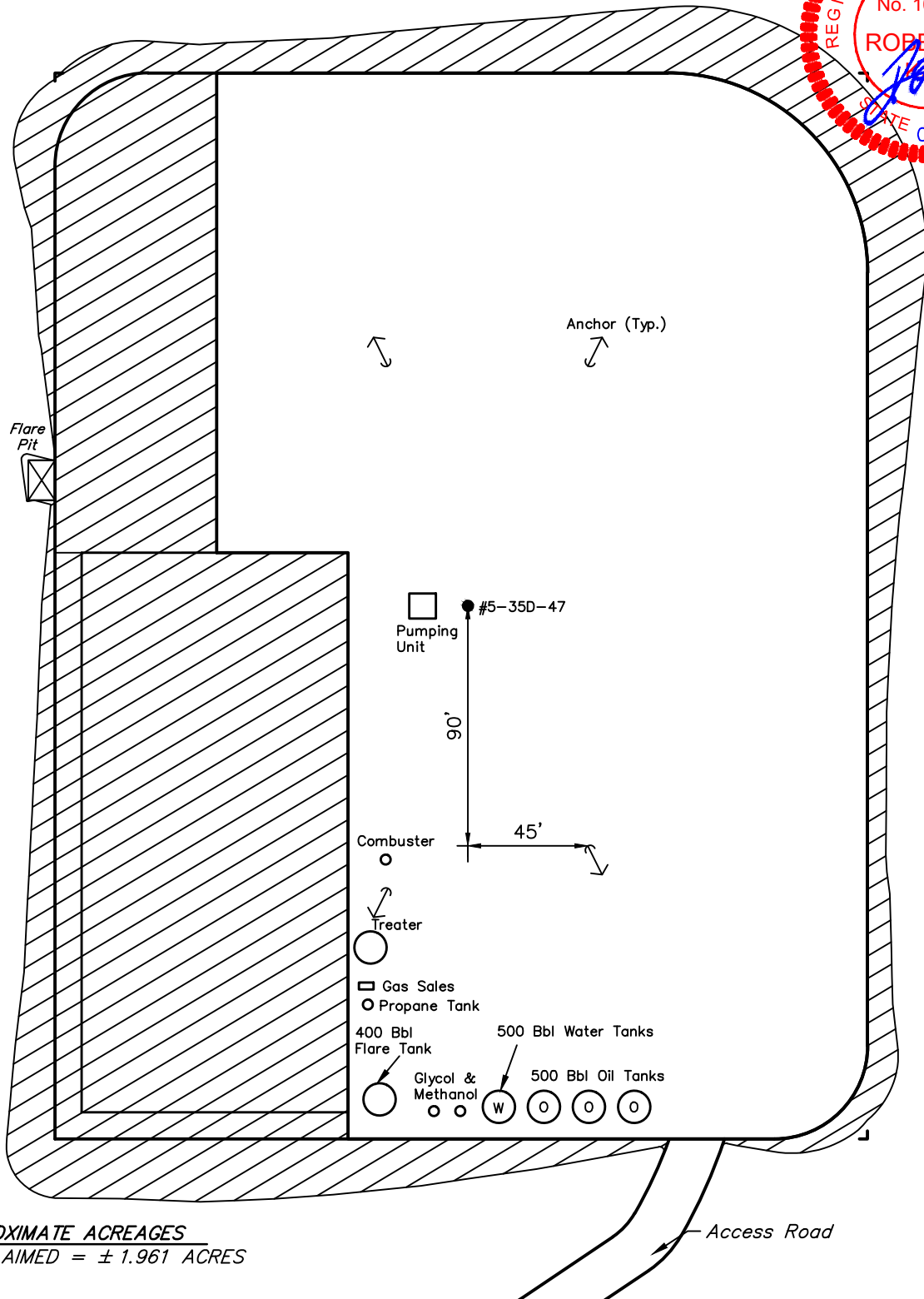
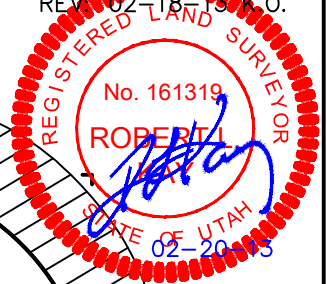
DATE: 01-16-12

DRAWN BY: V.H.

REV: 08-13-12 K.O.

REV: 09-18-12 K.O.

REV: 02-18-13 K.O.



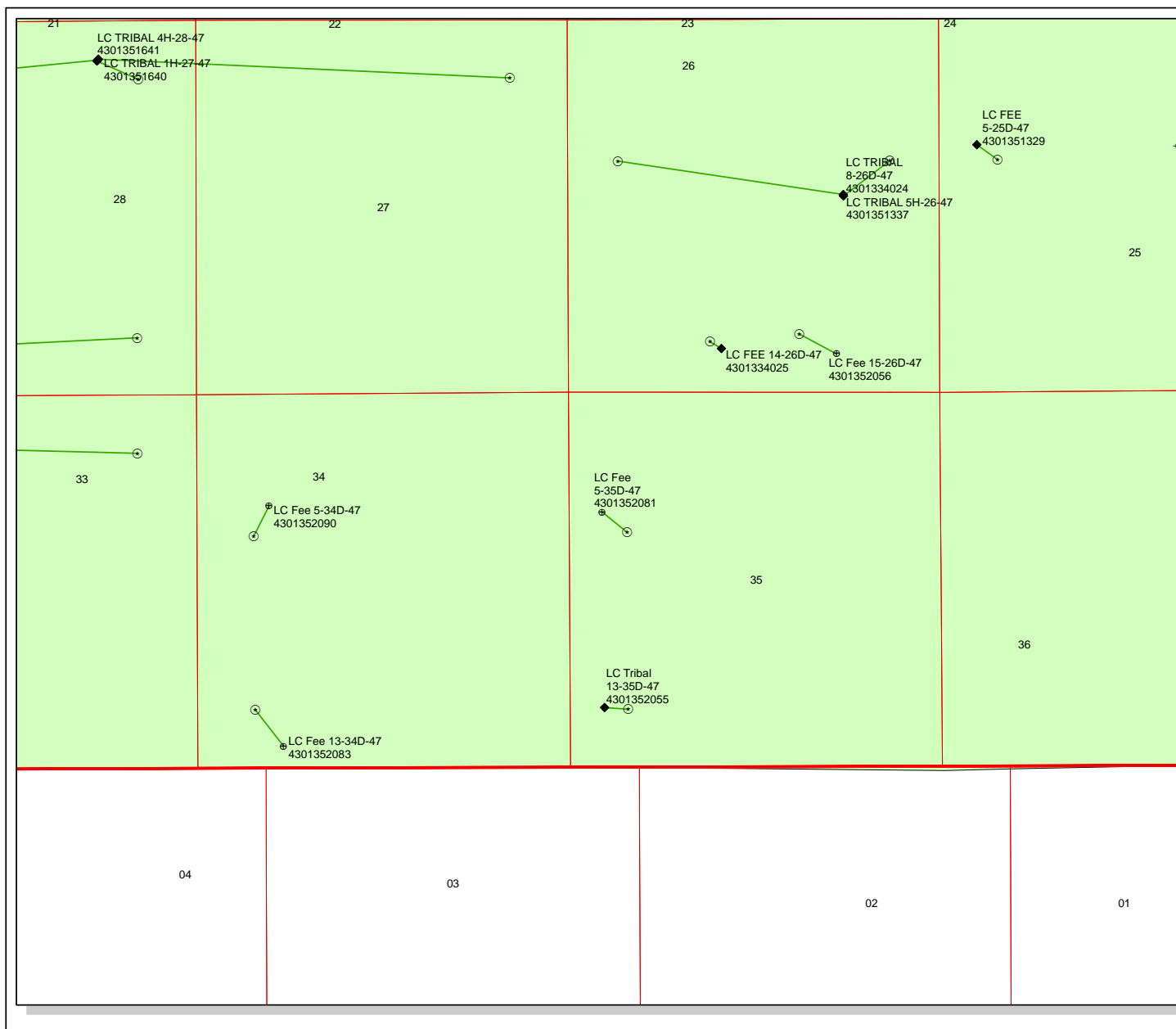
APPROXIMATE ACREAGES  
UN-RECLAIMED =  $\pm 1.961$  ACRES



INTERIM RECLAIMED AREA

**UINTAH ENGINEERING & LAND SURVEYING**  
85 So. 200 East \* Vernal, Utah 84078 \* (435) 789-1017

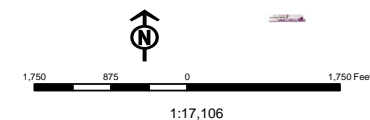
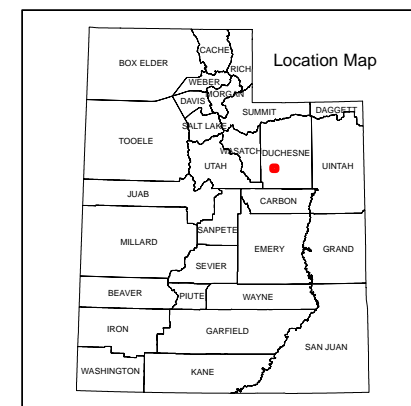
RECEIVED: March 07, 2013



**API Number: 4301352081**  
**Well Name: LC Fee 5-35D-47**  
**Township T04.0S Range R07.0W Section 35**  
**Meridian: UBM**  
**Operator: BILL BARRETT CORP**  
 Map Prepared:  
 Map Produced by Diana Mason

**Units**  
**STATUS**  
 ACTIVE  
 EXPLORATORY  
 GAS STORAGE  
 NF PP OIL  
 NF SECONDARY  
 PI OIL  
 PP GAS  
 PP GEOTHERMAL  
 PP OIL  
 SECONDARY  
 TERMINATED

**Fields**  
**STATUS**  
 Unknown  
 ABANDONED  
 ACTIVE  
 COMBINED  
 INACTIVE  
 STORAGE  
 TERMINATED



BOPE REVIEW BILL BARRETT CORP LC Fee 5-35D-47 43013520810000

Well Name	BILL BARRETT CORP LC Fee 5-35D-47 43013520810000			
String	Cond	Surf	Prod	
Casing Size(in)	16.000	9.625	9.625	
Setting Depth (TVD)	80	1600	7170	
Previous Shoe Setting Depth (TVD)	0	80	1600	
Max Mud Weight (ppg)	8.8	8.8	9.6	
BOPE Proposed (psi)	0	500	5000	
Casing Internal Yield (psi)	1000	3520	10640	
Operators Max Anticipated Pressure (psi)	3559		9.5	

Calculations	Cond String	16.000	"	
Max BHP (psi)	.052*Setting Depth*MW=	37		
			BOPE Adequate For Drilling And Setting Casing at Depth?	
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	27	NO	Fresh wtr spud mud
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	19	NO	
			*Can Full Expected Pressure Be Held At Previous Shoe?	
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	19	NO	
Required Casing/BOPE Test Pressure=		80	psi	
*Max Pressure Allowed @ Previous Casing Shoe=		0	psi *Assumes 1psi/ft frac gradient	

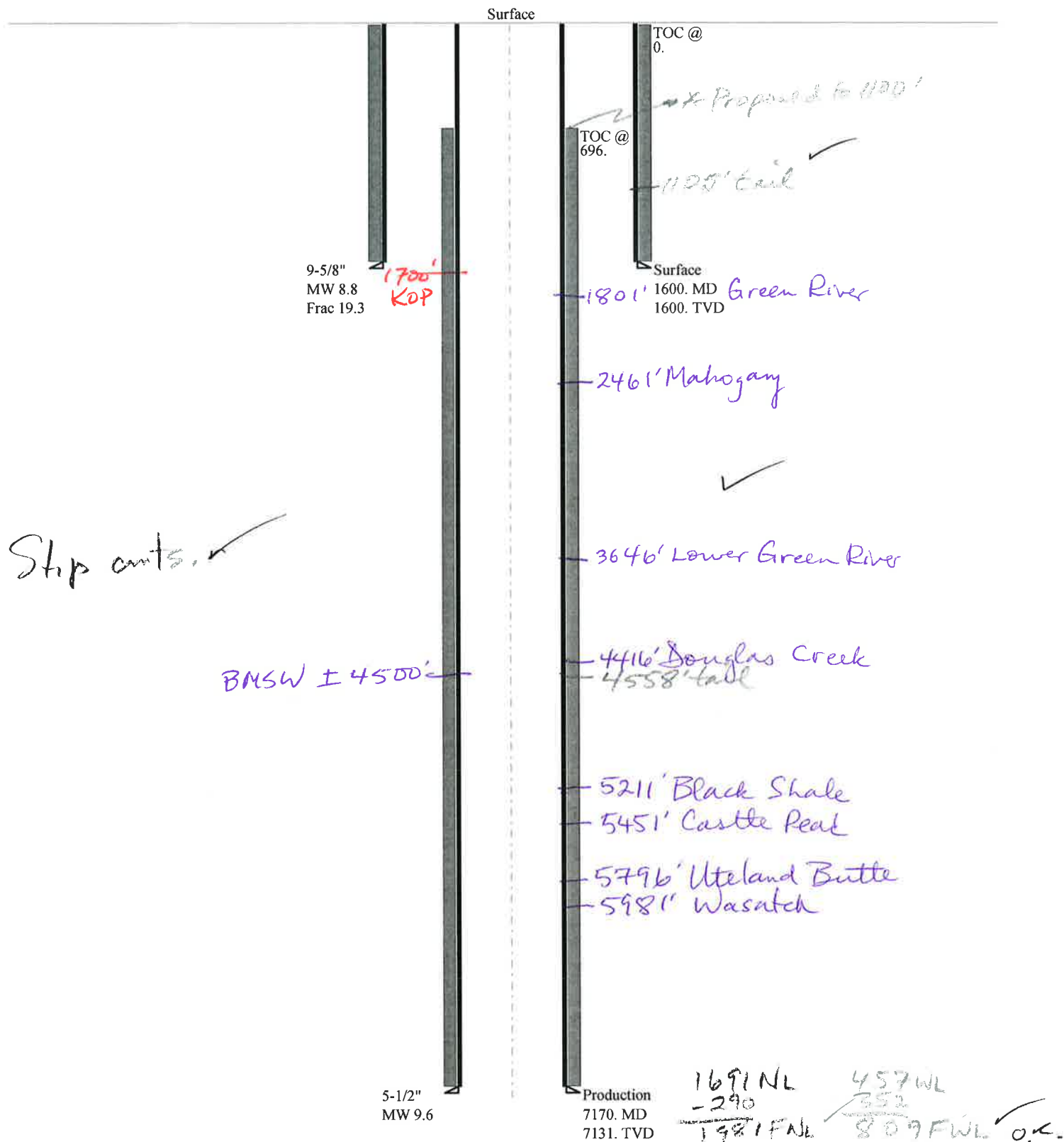
Calculations	Surf String	9.625	"	
Max BHP (psi)	.052*Setting Depth*MW=	732		
			BOPE Adequate For Drilling And Setting Casing at Depth?	
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	540	NO	Fresh wtr spud mud, diverter or rotate head
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	380	YES	OK
			*Can Full Expected Pressure Be Held At Previous Shoe?	
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	398	NO	OK
Required Casing/BOPE Test Pressure=		1600	psi	
*Max Pressure Allowed @ Previous Casing Shoe=		80	psi *Assumes 1psi/ft frac gradient	

Calculations	Prod String	9.625	"	
Max BHP (psi)	.052*Setting Depth*MW=	3579		
			BOPE Adequate For Drilling And Setting Casing at Depth?	
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	2719	YES	DAP polymer fluid, 11" 5M Ram Type BOP &
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	2002	YES	5M Annular
			*Can Full Expected Pressure Be Held At Previous Shoe?	
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	2354	NO	OK
Required Casing/BOPE Test Pressure=		5000	psi	
*Max Pressure Allowed @ Previous Casing Shoe=		1600	psi *Assumes 1psi/ft frac gradient	

Calculations	String		"	
Max BHP (psi)	.052*Setting Depth*MW=			
			BOPE Adequate For Drilling And Setting Casing at Depth?	
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=		NO	
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=		NO	
			*Can Full Expected Pressure Be Held At Previous Shoe?	
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=		NO	
Required Casing/BOPE Test Pressure=			psi	
*Max Pressure Allowed @ Previous Casing Shoe=			psi *Assumes 1psi/ft frac gradient	

# 43013520810000 LC Fee 5-35D-47

## Casing Schematic



Well name:	<b>43013520810000 LC Fee 5-35D-47</b>	
Operator:	<b>BILL BARRETT CORP.</b>	Project ID:
String type:	Surface	43-013-52081
Location:	DUCHESNE COUNTY	

**Design parameters:****Collapse**

Mud weight: 8.800 ppg  
Design is based on evacuated pipe.

**Minimum design factors:****Collapse:**

Design factor 1.125

**Burst:**

Design factor 1.00

**Environment:**

H2S considered? No  
Surface temperature: 74 °F  
Bottom hole temperature: 96 °F  
Temperature gradient: 1.40 °F/100ft  
Minimum section length: 100 ft

Cement top: Surface

**Burst**

Max anticipated surface pressure: 1,408 psi  
Internal gradient: 0.120 psi/ft  
Calculated BHP 1,600 psi

No backup mud specified.

**Tension:**

8 Round STC: 1.80 (J)  
8 Round LTC: 1.70 (J)  
Buttress: 1.60 (J)  
Premium: 1.50 (J)  
Body yield: 1.50 (B)

Tension is based on air weight.  
Neutral point: 1,392 ft

**Non-directional string.****Re subsequent strings:**

Next setting depth: 7,131 ft  
Next mud weight: 9.600 ppg  
Next setting BHP: 3,556 psi  
Fracture mud wt: 19.250 ppg  
Fracture depth: 1,600 ft  
Injection pressure: 1,600 psi

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost (\$)
1	1600	9.625	36.00	J-55	ST&C	1600	1600	8.796	13907

Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (kips)	Tension Strength (kips)	Tension Design Factor
1	731	2020	2.762	1600	3520	2.20	57.6	394	6.84 J

Prepared by: Helen Sadik-Macdonald  
Div of Oil, Gas & Mining

Phone: 801 538-5357  
FAX: 801-359-3940

Date: April 1, 2013  
Salt Lake City, Utah

**Remarks:**

Collapse is based on a vertical depth of 1600 ft, a mud weight of 8.8 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

*Engineering responsibility for use of this design will be that of the purchaser.*

Well name:	<b>43013520810000 LC Fee 5-35D-47</b>	
Operator:	<b>BILL BARRETT CORP.</b>	
String type:	Production	Project ID: 43-013-52081
Location:	DUCHESNE COUNTY	

**Design parameters:****Collapse**

Mud weight: 9.600 ppg  
Design is based on evacuated pipe.

**Minimum design factors:****Collapse:**

Design factor 1.125

**Burst:**

Design factor 1.00

**Environment:**

H2S considered? No  
Surface temperature: 74 °F  
Bottom hole temperature: 174 °F  
Temperature gradient: 1.40 °F/100ft  
Minimum section length: 1,000 ft

Cement top: 696 ft

**Burst**

Max anticipated surface pressure: 1,987 psi  
Internal gradient: 0.220 psi/ft  
Calculated BHP 3,556 psi

No backup mud specified.

**Tension:**

8 Round STC: 1.80 (J)  
8 Round LTC: 1.80 (J)  
Buttress: 1.60 (J)  
Premium: 1.50 (J)  
Body yield: 1.60 (B)

Tension is based on air weight.  
Neutral point: 6,132 ft

**Directional Info - Build & Drop**

Kick-off point 1700 ft  
Departure at shoe: 456 ft  
Maximum dogleg: 1.5 °/100ft  
Inclination at shoe: 0 °

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost (\$)
1	7170	5.5	17.00	P-110	LT&C	7131	7170	4.767	47227

Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (kips)	Tension Strength (kips)	Tension Design Factor
1	3556	7480	2.103	3556	10640	2.99	121.2	445	3.67 J

Prepared Helen Sadik-Macdonald  
by: Div of Oil, Gas & Mining

Phone: 801 538-5357  
FAX: 801-359-3940

Date: April 1, 2013  
Salt Lake City, Utah

**Remarks:**

Collapse is based on a vertical depth of 7131 ft, a mud weight of 9.6 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Collapse strength is (biaxially) derated for doglegs in directional wells by multiplying the tensile stress by the cross section area to calculate a

*Engineering responsibility for use of this design will be that of the purchaser.*

# Application for Permit to Drill

## Statement of Basis

### Utah Division of Oil, Gas and Mining

<b>APD No</b>	<b>API WellNo</b>	<b>Status</b>	<b>Well Type</b>	<b>Surf Owner</b>	<b>CBM</b>
7771	43013520810000	LOCKED	OW	I	No
<b>Operator</b>	BILL BARRETT CORP		<b>Surface Owner-APD</b>		
<b>Well Name</b>	LC Fee 5-35D-47		<b>Unit</b>		
<b>Field</b>	WILDCAT		<b>Type of Work</b>	DRILL	
<b>Location</b>	SWNW 35 4S 7W U 1691 FNL 457 FWL GPS Coord (UTM) 529805E 4438051N				

#### Geologic Statement of Basis

Bill Barrett proposes to set 80 ' of conductor and 1,600' of surface casing at this location. Conductor and surface casing holes will be drilled with a fresh water mud system. The base of the moderately saline water is at approximately 4,500 feet in this area. This location lies on the Green River Formation. Good aquifers can be found in the Green River Formation and associated alluvium. A search of Division of Water Rights records indicates no water wells within a 10,000 foot radius of the center of Section 35. Production casing cement should be brought up above the base of the moderately saline ground water in order to isolate it from fresher waters uphole.

Brad Hill  
**APD Evaluator**

3/20/2013  
**Date / Time**

#### Surface Statement of Basis

The surface rights at the proposed location are owned by the Ute Tribe. The operator is responsible for obtaining all necessary surface permits and rights-of-way.

Brad Hill  
**Onsite Evaluator**

3/20/2013  
**Date / Time**

#### Conditions of Approval / Application for Permit to Drill

<b>Category</b>	<b>Condition</b>
	None.

## WORKSHEET APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 3/7/2013

API NO. ASSIGNED: 43013520810000

WELL NAME: LC Fee 5-35D-47

OPERATOR: BILL BARRETT CORP (N2165)

PHONE NUMBER: 303 312-8172

CONTACT: Venessa Langmacher

PROPOSED LOCATION: SWNW 35 040S 070W

Permit Tech Review: ☒

SURFACE: 1691 FNL 0457 FWL

Engineering Review: ☒

BOTTOM: 1980 FNL 0810 FWL

Geology Review: ☒

COUNTY: DUCHESNE

LATITUDE: 40.09222

LONGITUDE: -110.65036

UTM SURF EASTINGS: 529805.00

NORTHINGS: 4438051.00

FIELD NAME: WILDCAT

LEASE TYPE: 4 - Fee

LEASE NUMBER: Fee

PROPOSED PRODUCING FORMATION(S): GREEN RIVER(LWR)-WASATCH

SURFACE OWNER: 2 - Indian

COALBED METHANE: NO

## RECEIVED AND/OR REVIEWED:

☒ PLAT☒ Bond: STATE - LPM4138148☐ Potash☐ Oil Shale 190-5☐ Oil Shale 190-3☐ Oil Shale 190-13☒ Water Permit: 43-180☐ RDCC Review:☐ Fee Surface Agreement☐ Intent to Commingle

Commingle Approved

## LOCATION AND SITING:

☐ R649-2-3.

Unit:

☐ R649-3-2. General☒ R649-3-3. Exception☒ Drilling Unit

Board Cause No: Cause 139-87

Effective Date: 12/6/2011

Siting: 4 Prod LGRRV-WSTC Wells

☒ R649-3-11. Directional Drill

Comments: Presite Completed

## Stipulations:

- 1 - Exception Location - bhill
- 4 - Federal Approval - dmason
- 5 - Statement of Basis - bhill
- 12 - Cement Volume (3) - hmacdonald
- 15 - Directional - dmason
- 25 - Surface Casing - hmacdonald

RECEIVED: April 09, 2013



GARY R. HERBERT  
*Governor*

GREGORY S. BELL  
*Lieutenant Governor*

# State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER  
*Executive Director*

Division of Oil, Gas and Mining

JOHN R. BAZA  
*Division Director*

## Permit To Drill

\*\*\*\*\*

**Well Name:** LC Fee 5-35D-47  
**API Well Number:** 43013520810000  
**Lease Number:** Fee  
**Surface Owner:** INDIAN  
**Approval Date:** 4/9/2013

### Issued to:

BILL BARRETT CORP, 1099 18th Street Ste 2300, Denver, CO 80202

### Authority:

Pursuant to Utah Code Ann. 40-6-1 et seq., and Utah Administrative Code R649-3-1 et seq., the Utah Division of Oil, Gas and Mining issues conditions of approval, and permit to drill the listed well. This permit is issued in accordance with the requirements of Cause 139-87. The expected producing formation or pool is the GREEN RIVER(LWR)-WASATCH Formation(s), completion into any other zones will require filing a Sundry Notice (Form 9). Completion and commingling of more than one pool will require approval in accordance with R649-3-22.

### Duration:

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date

### Exception Location:

Appropriate information has been submitted to DOGM and administrative approval of the requested exception location is hereby granted.

### General:

Compliance with the requirements of Utah Admin. R. 649-1 et seq., the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

### Conditions of Approval:

State approval of this well does not supercede the required federal approval, which must be obtained prior to drilling.

In accordance with Utah Admin. R.649-3-11, Directional Drilling, the operator shall submit a complete angular deviation and directional survey report to the Division within 30 days following completion of the well.

Compliance with the Conditions of Approval/Application for Permit to Drill outlined in the Statement of Basis (copy attached).

Cement volume for the 5 1/2" production string shall be determined from actual

hole diameter in order to place cement from the pipe setting depth back to 1100' MD as indicated in the submitted drilling plan.

Surface casing shall be cemented to the surface.

**Additional Approvals:**

The operator is required to obtain approval from the Division of Oil, Gas and mining before performing any of the following actions during the drilling of this well:

- Any changes to the approved drilling plan - contact Dustin Doucet
- Significant plug back of the well - contact Dustin Doucet
- Plug and abandonment of the well - contact Dustin Doucet

**Notification Requirements:**

The operator is required to notify the Division of Oil, Gas and Mining of the following actions during drilling of this well:

- Within 24 hours following the spudding of the well - contact Carol Daniels  
OR  
submit an electronic sundry notice (pre-registration required) via the Utah Oil & Gas website  
at <http://oilgas.ogm.utah.gov>
- 24 hours prior to testing blowout prevention equipment - contact Dan Jarvis
- 24 hours prior to cementing or testing casing - contact Dan Jarvis
- Within 24 hours of making any emergency changes to the approved drilling program  
- contact Dustin Doucet
- 24 hours prior to commencing operations to plug and abandon the well - contact Dan Jarvis

**Contact Information:**

The following are Division of Oil, Gas and Mining contacts and their telephone numbers (please leave a voicemail message if the person is not available to take the call):

- Carol Daniels 801-538-5284 - office
- Dustin Doucet 801-538-5281 - office  
801-733-0983 - after office hours
- Dan Jarvis 801-538-5338 - office  
801-231-8956 - after office hours

**Reporting Requirements:**

All reports, forms and submittals as required by the Utah Oil and Gas Conservation General Rules will be promptly filed with the Division of Oil, Gas and Mining, including but not limited to:

- Entity Action Form (Form 6) - due within 5 days of spudding the well
- Monthly Status Report (Form 9) - due by 5th day of the following calendar month
- Requests to Change Plans (Form 9) - due prior to implementation
- Written Notice of Emergency Changes (Form 9) - due within 5 days
- Notice of Operations Suspension or Resumption (Form 9) - due prior to implementation
- Report of Water Encountered (Form 7) - due within 30 days after completion
- Well Completion Report (Form 8) - due within 30 days after completion or

plugging

**Approved By:**

A handwritten signature in black ink, appearing to read "J. Rogers", written over a horizontal line.

For John Rogers  
Associate Director, Oil & Gas

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		<b>FORM 9</b>
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> Fee
<b>1. TYPE OF WELL</b> Oil Well		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b> UTE
<b>2. NAME OF OPERATOR:</b> BILL BARRETT CORP		<b>7. UNIT or CA AGREEMENT NAME:</b>
<b>3. ADDRESS OF OPERATOR:</b> 1099 18th Street Ste 2300 , Denver, CO, 80202		<b>8. WELL NAME and NUMBER:</b> LC Fee 5-35D-47
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 1691 FNL 0457 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: SWNW Section: 35 Township: 04.0S Range: 07.0W Meridian: U		<b>9. API NUMBER:</b> 43013520810000
<b>PHONE NUMBER:</b> 303 312-8134 Ext		<b>9. FIELD and POOL or WILDCAT:</b> WILDCAT
<b>COUNTY:</b> DUCHESNE		<b>STATE:</b> UTAH

11.

CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION
<input checked="" type="checkbox"/> <b>NOTICE OF INTENT</b> Approximate date work will start: <b>4/9/2015</b>	<input type="checkbox"/> ACIDIZE <input type="checkbox"/> ALTER CASING <input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> DEEPEN <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> PLUG BACK <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> WILDCAT WELL DETERMINATION <input type="checkbox"/> OTHER
<input type="checkbox"/> <b>SUBSEQUENT REPORT</b> Date of Work Completion:	<input checked="" type="checkbox"/> <b>APD EXTENSION</b> OTHER: <input style="width: 100px;" type="text"/>
<input type="checkbox"/> <b>SPUD REPORT</b> Date of Spud:	
<input type="checkbox"/> <b>DRILLING REPORT</b> Report Date:	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

BBC hereby requests a one year extension for APD

**Approved by the**  
**February 12, 2015**  
**Oil, Gas and Mining**

**Date:** \_\_\_\_\_  
**By:**

<b>NAME (PLEASE PRINT)</b> Christina Hirtler	<b>PHONE NUMBER</b> 303 312-8597	<b>TITLE</b> Administrative Assistant
<b>SIGNATURE</b> N/A	<b>DATE</b> 2/11/2015	



**The Utah Division of Oil, Gas, and Mining**

- State of Utah
- Department of Natural Resources

Electronic Permitting System - Sundry Notices

**Request for Permit Extension Validation Well Number 43013520810000**

API: 43013520810000

Well Name: LC Fee 5-35D-47

Location: 1691 FNL 0457 FWL QTR SWNW SEC 35 TWNP 040S RNG 070W MER U

Company Permit Issued to: BILL BARRETT CORP

Date Original Permit Issued: 4/9/2013

The undersigned as owner with legal rights to drill on the property as permitted above, hereby verifies that the information as submitted in the previously approved application to drill, remains valid and does not require revision. Following is a checklist of some items related to the application, which should be verified.

- If located on private land, has the ownership changed, if so, has the surface agreement been updated? ☒ Yes ☐ No
- Have any wells been drilled in the vicinity of the proposed well which would affect the spacing or siting requirements for this location? ☐ Yes ☒ No
- Has there been any unit or other agreements put in place that could affect the permitting or operation of this proposed well? ☐ Yes ☒ No
- Have there been any changes to the access route including ownership, or rightof- way, which could affect the proposed location? ☐ Yes ☒ No
- Has the approved source of water for drilling changed? ☐ Yes ☒ No
- Have there been any physical changes to the surface location or access route which will require a change in plans from what was discussed at the onsite evaluation? ☐ Yes ☒ No
- Is bonding still in place, which covers this proposed well? ☒ Yes ☐ No

Signature: Christina Hirtler

Date: 2/11/2015

Title: Administrative Assistant Representing: BILL BARRETT CORP



GARY R. HERBERT  
Governor

SPENCER J. COX  
Lieutenant Governor

# State of Utah

## DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER  
Executive Director

### Division of Oil, Gas and Mining

JOHN R. BAZA  
Division Director

April 7, 2016

Brady Riley  
BILL BARRETT CORPORATION  
1099 18th Street | Suite 2300  
Denver, CO 80202

Re: APDs Rescinded for Bill Barrett Corporation, Duchesne County

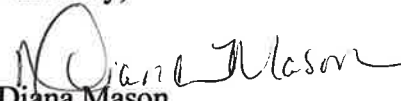
Dear Ms. Riley:

Enclosed find the list of APDs that is being rescinded. No drilling activity at these locations has been reported to the division. Therefore, approval to drill these wells is hereby rescinded as of April 7, 2016.

A new APD must be filed with this office for approval prior to the commencement of any future work on the subject location.

If any previously unreported operations have been performed on this well location, it is imperative that you notify the Division immediately.

Sincerely,

  
Diana Mason  
Environmental Scientist

cc: Well File  
Bureau of Land Management, Vernal



43-013-52058 LC Fee 4-24D-47  
43-013-52056 LC Fee 15-26D-47  
43-013-52090 LC Fee 5-34D-47  
43-013-52081 LC Fee 5-35D-47



Diana Mason <dianawhitney@utah.gov>

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## BBC Rescind Request

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Brady Riley <briley@billbarrettcorp.com>

Thu, Apr 7, 2016 at 9:22 AM

To: "dianawhitney@utah.gov" <dianawhitney@utah.gov>

Diana,

Please rescind the following approved APDs, as they expire this month and BBC would like to refile these permits.

LC Fee 4-24D-47

LC Fee 15-26D-47

LC Fee 5-34D-47

LC Fee 5-35D-47

Thanks and please let me know if you have questions.

*Brady Riley*

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### **BILL BARRETT CORPORATION**

1099 18th Street | Suite 2300

Denver, CO 80202

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C 720.402.7541

F 303.291.0420

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**Bill Barrett Corporation**